# LARGE WOODY DEBRIS IN BULL TROUT SPAWNING STREAMS IN NORTHWEST MONTANA

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# TABLE OF CONTENTS

# LIST OF FIGURES

# LIST OF TABLES

# INTRODUCTION

Large woody debris (LWD) plays numerous important roles in the structure and function of stream ecosystems (Gregory et al. 1991; Lamberti and Gregory 1996). Riparian forests often contribute vast quantities of LWD to a channel network, directly affecting both large and small scale stream geomorphology, hydrologic processes, and stream biota (Abbe and Montgomery 1996; Bisson and Montgomery 1996). Large wood accumulations influence the dissipation of stream energy and thus the ability of the stream to transport material. For example, LWD has been associated with channel avulsion, floodplain formation, and island development (Triska 1984; Abbe and Montgomery 1996). LWD also plays an important role in localized modification of streambed morphology (Bisson et al. 1987; Ralph et al. 1994), pool frequency and channel geometry (Bestcha and Platts 1986; Fausch and Northcote 1992; Richmond and Fausch 1995). The orientation and position of LWD in streams affects storage of organic and inorganic matter (Bilby and Ward 1989; Nakamura and Swanson 1993; Webster and Meyer 1997). Likewise , wood serves as trophic support of stream biota by providing organic matter for stream invertebrates and substratum for attachment and growth (Angermeier and Karr 1984; Benke et al. 1985; Hauer and Benke 1987, 1991).

The factors that directly affect introduction, stability, or character of stream LWD have a potentially significant influence on native fish populations that utilize streams for spawning, rearing, or growth and

completion of life histories (Andrus et al. 1988). Large woody debris and the implications of change in LWD on salmonid populations have been the focus of numerous studies (e.g., Marcus et al. 1990; Ralph et al. 1994; Riley and Fausch 1995). Of particular interest in western Montana, and indeed, throughout the Pacific Northwest are bull trout *(Salvalinus confluentis)*, a native char whose populations have been declining range-wide and in many areas eliminated because of habitat degradation (Fraley and Shepard 1989; Howell and Buchanan 1992; Rieman and McIntyre1993), over-harvest, and displacement by exotic species (Donald and Alger 1992; Leary et al. 1993).

Despite a generally ubiquitous trend of decline, until recently, the bull trout populations of the Flathead Basin in northwest Montana were considered relatively healthy. Strong spawning populations from Flathead Lake, Swan Lake and Hungry Horse Reservoir have been an important part of the native fish fauna and an important sport fishery. In the past several years, however, frequency distributions of bull trout spawning in tributaries of the North and Middle Forks of the Flathead River (i.e., the Flathead Lake population) have demonstrated serious declines (Weaver in press). Over fishing, competitive interactions, predation of juveniles, food web alterations in Flathead Lake, and loss of habitat for spawning and rearing have all been suggested as causes for this decline. It is highly likely, however, that no single factor can be isolated as the over-riding bottleneck. Rather, these factors likely play a synergistic role in the reduction of the Flathead Lake population. For example, inundation of spawning gravels with fine sediments or changes in channel form and complexity may be major factors affecting the decline in bull trout spawning in the tributary drainages of the North and Middle Forks of the

Flathead River (Weaver and Fraley 1991). Low frequency of spawning in some of the tributaries of the Swan River have been associated with the presence of logging roads (Baxter 1997). Although, the mechanisms that may be leading to the observed decline in bull trout are unclear, either on the landscape or in the streams, hydrologic and vegetative changes associated with past and perhaps present land use may play a role. A significant part of that role may be the result of change in the frequency and character of in-stream LWD.

Although it is known that LWD plays an important role among Pacific Northwest Coastal and Cascade streams and in Rocky Mountain streams in Colorado, little information is available about the character or function of LWD in streams of the northern Rocky Mountains. One should not assume that the processes that have been documented among Washington and Oregon streams (e.g., Nakamura and Swanson 1993; Ralph et al. 1994; Bisson and Montgomery 1996) or streams in Colorado (e.g., Fausch and Northcote 1992; Richmond and Fausch 1995) are seamlessly applicable in western Montana. Differences in climatic regime, landscape geo-morphology, hydologic regime, and the size, density and longevity of dominant riparian species among these regions will have direct bearing on the interactive relationship between stream structure and function and LWD.

Regardless of the various debates as to the cause of bull trout population declines or the current cumulative effects impinging on the health and long-term viability of bull trout populations in western Montana, the maintenance of productive spawning and rearing habitat will be critical to the long-term sustainability or recovery of bull trout (see Fausch and Northcote 1992). As the recent changes in the food web of

Flathead Lake, with its cascading effects on higher trophic levels (Spencer et al. 1991), comes to some new quasi-equilibrium; population restoration for bull trout will be significantly affected by reproductive success and juvenile survivorship. LWD may play a critical role in maintaining appropriate stream habitat and thus affect the long-term sustainability of bull trout populations in the Flathead Basin.

The purpose of this study was to describe the characteristics and selected functions of LWD among an array of known, historical bull trout spawning streams in the Flathead Basin. It was not our intention to specifically locate bull trout redds or covariation of redds and LWD; however, in several instances redds did occur with a study reach. Rather, streams were selected from each of the four major tributaries in the drainage; [the North and Middle Forks of the Flathead River (i.e., serving the Flathead Lake bull trout population), the South Fork of the Flathead River (i.e., serving the Hungry Horse Reservoir population) and the Swan River drainage (i.e., serving the Swan Lake population)] as subbasin representatives for the purposes of LWD characterization. Study streams also represented differing levels of land-use; including drainages with extensive harvest, including riparian clearcutting, to streams within designated wilderness. There were several primary objectives of the research: 1) to characterize LWD in bull trout spawning streams of the Flathead Basin, 2) examine relationships of LWD size, position, and orientation across an array of stream sizes 3) the role of LWD in affecting local scale, bed-form and stream morphology, and 4) to examine the potential effect of watershed landuse and/or riparian harvest on the size frequency structure, orientation and decay relationships of LWD.

# STUDY AREA and METHODS

*The Flathead Basin*

This study was conducted in the Flathead Basin, an approximately 24,000 $km^2$ drainage in northwestern Montana and southeastern British Columbia along the west slope of the Continental Divide and within the belt-series of the northern Rocky Mountains (Figure 1). Sedimentary bedrock from the late Paleogene to the Proterozoic underlies the region and has been affected by low-grade metamorphosis (Ross 1959, Raup et al. 1983). These mountain ranges are part of the Rocky Mountain Belt Supergroup and consist of argillites, siltites, and carbonates with a maximum stratigraphic thickness of 5,200m (Whipple et al. 1984). The heavily forested valleys are mantled by colluvium and glacial till. During the height of the last major glaciation, about 20,000 years ago, the Flathead Basin was covered by glacial ice. The main glacial advance flowed from the cordilleran ice sheet down the Rocky Mountain Trench. Smaller valley glaciers flowed from the Livingston, Whitefish, Swan, Flathead and Mission Ranges to merge along the valley floors forming trunk glaciers as much as 1000m thick (Alden 1953). Alluvial valley segments of tributary drainages formed with faulting and local accumulations of valley fill from alluvial and glacial sources.

Twenty stream reaches were selected for study from eight streams distributed around the basin (Figure 1; Table 1). All reaches were in third or fourth order segments (sensu Strahler 1963) of streams identified by Montana Department of Fish, Wildlife and Parks as known bull trout spawning tributaries (T. Weaver, pers. comm.). Additionally, streams were selected based on their drainage-wide land use history. Reaches within

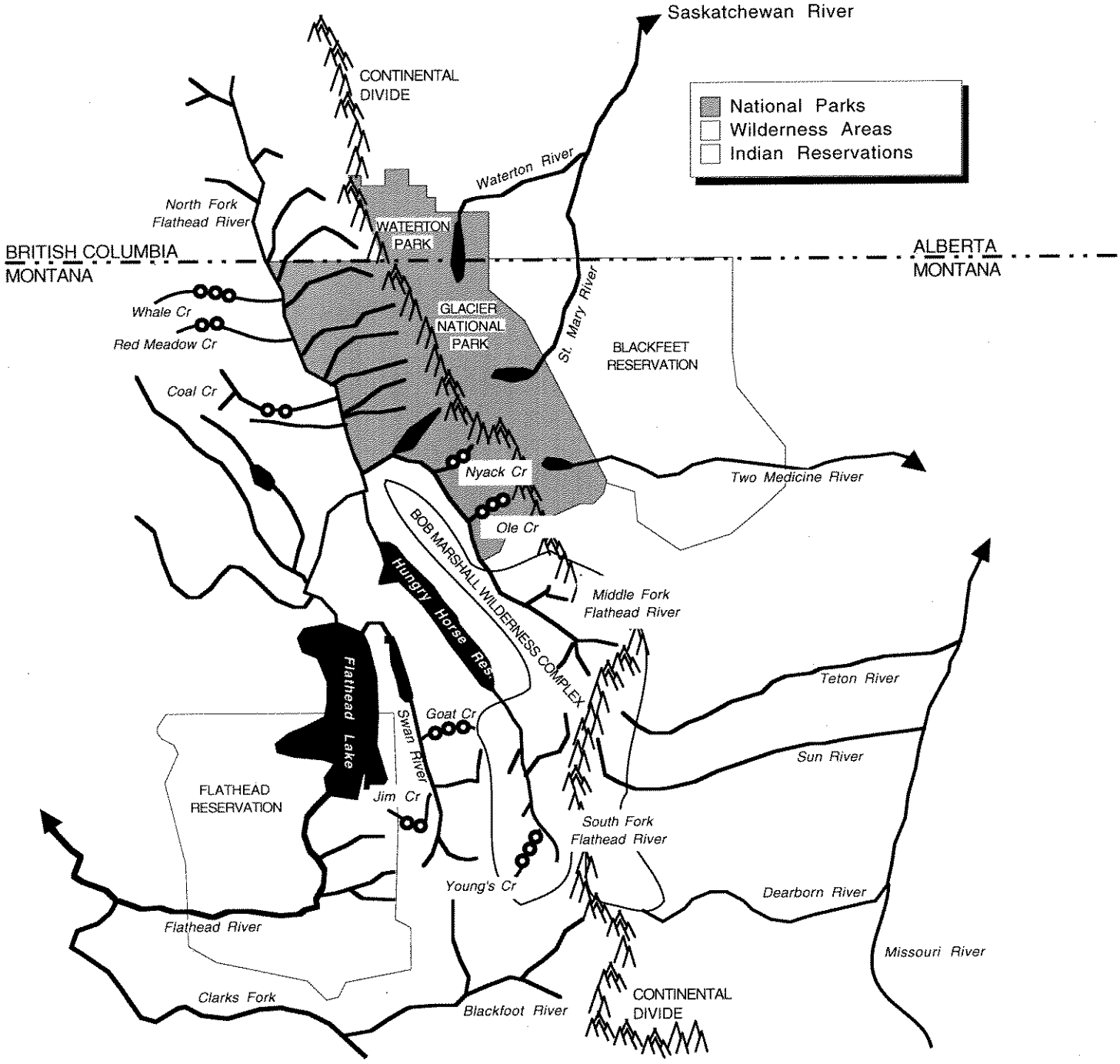



Figure 1. Map of the Flathead Basin and northern Continental Divide region of northwest Montana. Names of major drainages are given next to each river. Study stream reaches are denoted by open circles and names of the study streams.

Table 1. Drainage, stream name, reach, watershed area above study reaches and the number of channels in each study reach.

| Flathead River Drainage | Stream Name | Drainage area (acres) | Reach | Number of channels |
|---|---|---|---|---|
| Middle Fork | Ole Creek | 25429 | A | 1 |
| | | | B | 1 |
| | | | C | 1 |
| | Nyack Creek | 54353 | A | 1 |
| | | | B | 1 |
| North Fork | Red Meadow Creek | 3982 | A | 1 |
| | | | B | 1 |
| | Whale Creek | 24296 | A | 1 |
| | | | B | 1 |
| | | | C | 1 |
| | Coal Creek | 29920 | A | 2 |
| | | | B | 1 |
| South Fork | Young's Creek | 57523 | A | 2 |
| | | | B | 1 |
| | | | C | 1 |
| Swan River | Jim Creek | 9151 | A | 1 |
| | | | B | 1 |
| | Goat Creek | 13837 | A | 2 |
| | | | B | 3 |
| | | | C | 4 |

streams were selected based on prevalent streamside management within the basin. In some cases, as in Red Meadow Creek, the selected reaches flowed through riparian clearcuts, which occur commonly along that stream's length. Among other streams, such as Ole Creek in Glacier National Park, the riparian zone along the study reach was in a natural, undisturbed condition.

*Stream Channel*

Stream cross-sectional profiles, sinuosity and gradient were measured at each stream reach using an Abney level, a Sonin® electronic distance measurer, and a leveling rod. Eleven transects (A-K) were taken across each stream reach at 10m intervals covering a total reach length of 100m. Each transect consisted of channel profiles measured from the stream thalweg perpendicularly to the top of the bankfull channel on both sides of the stream. Typically 8-12 measures were taken to develop the channel profile at each transect. The channel profile data included all major breaks in elevation, the wetted channel width, water depth at the thalweg (at the time of measure), and height of the average bankfull channel. The angle from the stream bank to the stream thalweg and then to the thalweg position of the upstream transect was measured with a surveying compass. The change in bed height and water depth between each transect profile was measured using the Abney level, electronic distance measurer, and the leveling rod. Current velocity at the thalweg of each transect was estimated as the mean of five separate measures over a 3m distance using a surface float and stopwatch. The 10m intervals between each transect was identified as a stream reach block.

*Large Woody Debris*

Measures of LWD were made within the 10m stream reach blocks of each 100m stream reach and referenced to the lower transect. For example, the LWD in segment **g** would be all pieces between transects **G** and **H**. LWD was defined as logs ≥10cm diameter and ≥1m in length. Although there is no standard criteria established as to the minimum size that constitutes LWD, the criteria used here are the same as has been used in research at other locations (Andrus et al. 1988, Fausch and Northcote 1992, Richmond and Fausch 1995). Each piece of wood meeting the LWD criteria was measured if any part occurred within or was suspended above the bank-full stream channel. The diameter was measured at each end of the LWD piece with a 1m caliper. The length of each piece was measured with the Sonin® electronic distance measurer if the length was >2m or with the caliper for shorter pieces. Piece volume was estimated from the equation in Lienkaemper and Swanson (1987):

$$V = \frac{\pi(D_1^2 + D_2^2)L}{8}$$

where V is the volume, $D_1$ and $D_2$ are the diameters at opposite ends of the piece and L is the piece length. All large root wads were considered LWD regardless of length. Stumped root wads with a length <1m were common among streams whose riparian areas had been logged. Volume of root wads were determined by measuring the diameter of the root structure across the dominant mass ($D_1$) and the bole of the tree or stump above the root structure ($D_2$) and the distance between these measurements (L).

The position and orientation of LWD to the channel was determined

for each LWD piece. Piece position was recorded as being in one of three possibilities: (a) no contact with either bank, (b) contacting either the left or right bank, and (c) contacting both banks. In addition to simply contacting a bank, many pieces were strongly attached to one, or rarely, both banks. Bank attachment appeared to have a significant effect on orientation and the ability of the piece to resist stream power and remain across the stream thalweg. In turn, this dramatically affected streambed morphology.

Orientation of LWD is known to affect stream flow and bed morphology (Robison and Bestcha 1990). Likewise, stream power affects piece orientation by moving unattached ends in a downstream direction. Piece orientation was divided into three categories: (a) at an approximately 0° angle (parallel) to the channel, (b) at an approximately 45° angle to the channel, and (c) at an approximately 90° angle (perpendicular) to the channel. We also noted whether a piece had a rootwad attached to the bole since this plays an important function in the attachment, orientation, and distribution dynamics of the piece.

The relative age of each piece was assessed using a modification of the Grette (1985) decay classification procedure which divided LWD into four decay classes: (1) bark and branches attached, (2) bark and branches missing, wood solid with evidence of decay restricted to the outer perimeter, (3) wood showing significant signs of decay to at least depths of 5-10cm, and (4) wood soft and decayed nearly or completely to the center of the piece. We later combined categories c and d for our analysis because of the infrequency of observing type 4 decay-class LWD. We believe the scarcity of decay-class 4 wood is due to the rapidity of final decay and disappearance once a piece transitions from class 3 to class 4.

# RESULTS and DISCUSSION

Summary illustrations for each stream reach are given in Appendix A. The LWD data are compiled for reference in Appendix B. The Appendix A illustrations are organized by study reach and consist of three illustrations for each reach.

In Appendix A, Illustration 1 for each stream reach consists of three panels; 1) a topographical representation of the study reach including elevation contours, the location and orientation of survey transects and survey points, the position of the stream thalweg and bull trout redds, if present, 2) Figure A, is the number of LWD pieces measured within each of the ten 10m study segments, and 3) Figure B, the LWD volume ($m^3$) within those same 10m segments.

Illustration 2 consists of six figures of percentages of LWD pieces within each of the 10m segments: 1) percent by diameter (cm) class, 2) percent by decay stage, 3) percent by position, 4) percent by orientation, 5) percent by attachment, and 6) percent having a root wad attached.

Illustration 3 consists of two figures: 1) the top panel is a longitudinal profile of thalweg and water surface elevation, and 2) the lower panel is a longitudinal profile of current velocity at the thalweg of each transect.

These illustrations of each stream reach, the LWD found within each reach, and the streambed contours and thalweg current velocities are presented to provide a quick reference for the data from each stream reach.

*General Characteristics of Study Reaches*

All study reaches were within 3rd- to 4th-order segments of known bull trout streams. Mean bank-full widths of all stream reaches combined were 14.15m (6.6m [1 stddev]) with a range of 3.9m to 36.7m across all transects. Study reaches were variable, both between and within streams. Stream gradients among all reaches were moderate (mean 1.02%, max 2.6%), but again highly variable. The thalweg position of some downstream transects were at a higher elevation than upstream transects; clearly illustrating streambed habitat complexity.

Five of the 20 study reaches had one or more side channels. In cases where side channels were present, there was always one dominant channel. The side channels were always small with only minor flow. The side channels in Coal Creek Reach A and Young's Creek Reach B contained a high density of LWD and likely were at one time the main channel.

Stream depths across all transects ranged from a minimum depth of 0.15m in Ole Creek Reach A to a maximum of 1.33m in Young's Creek Reach C (Figure 2). Among reach maximum depths, Young's Creek, which also had the largest drainage area above the study reaches, had the highest maximum depths. The relationship of stream depths to drainage area showed a weakly positive correlation for both maximum depth and mean depth. The minimum depth of each stream reach was not correlated with basin size (Figure 3).

The substratum of each study reach was similar, generally composed of gravel and cobble; although occasionally larger boulders (50-100cm) were also present. The drainage area above the study reaches varied from 57,523 acres (23,289 ha) on Young's Creek to 3,982 acres (1,612 ha) on Red Meadow Creek (Table 1).

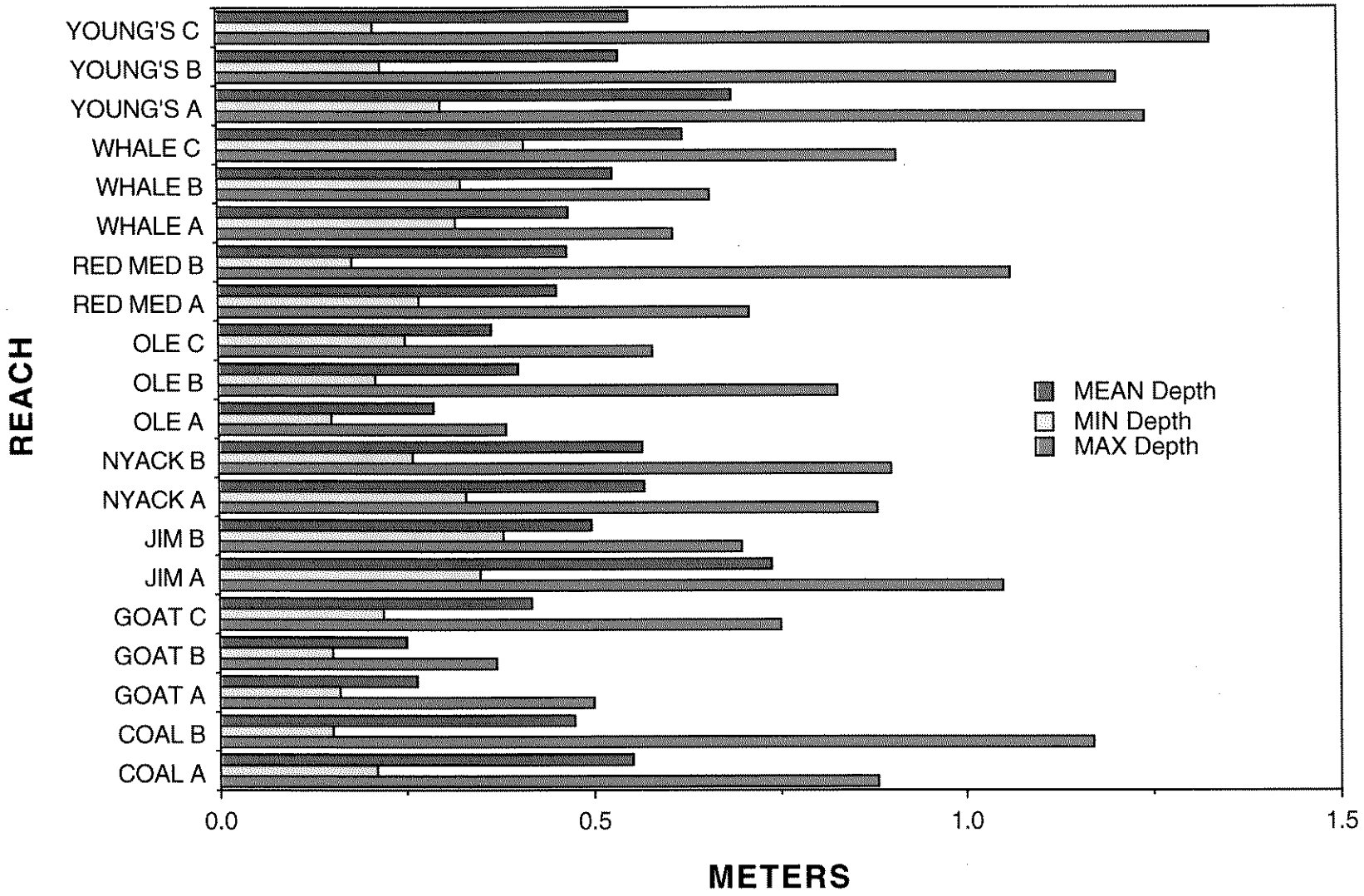



Figure 2. Mean, maximum and minimum depth of the stream thalweg across all transects within the study stream reaches.

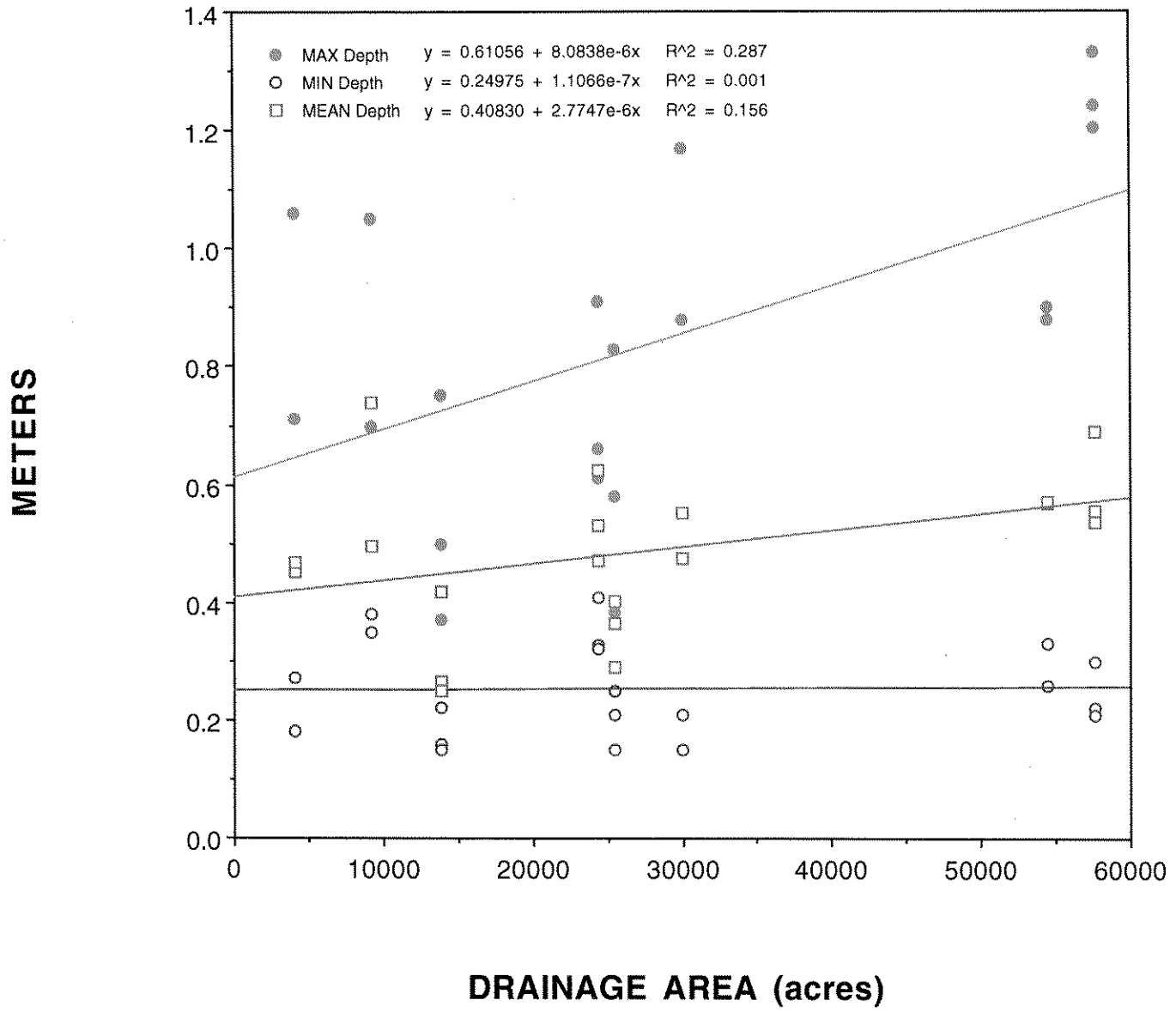



Figure 3. Mean, maximum and minimum thalweg depths among all transects for each stream reach regressed against the drainage area of each watershed above each study reach.

*General Characterization of Large Woody Debris*

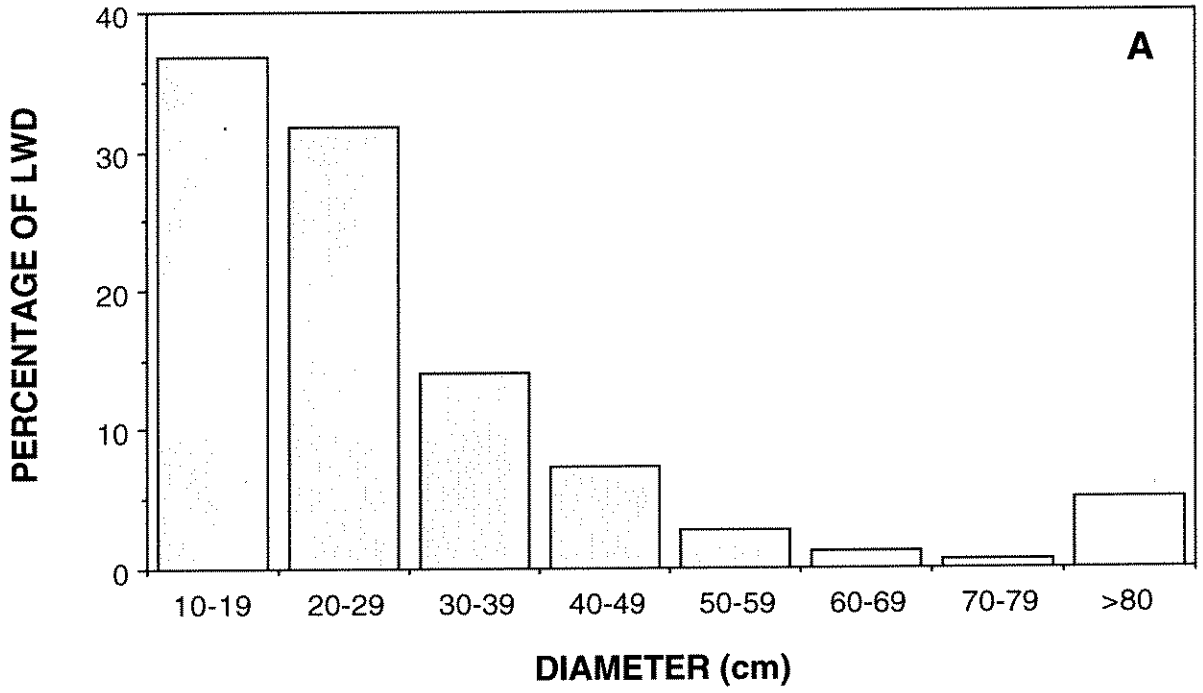
A total of 1320 pieces of LWD were counted and measured among all study reaches. The number of pieces and volume of LWD across all reaches was highly variable (Table 2). For example, Reach A on Young's Creek had 184 pieces, while in contrast Reach B on Nyack Creek had only 5 pieces of LWD.

Among all stream reaches the size of the LWD was also extremely variable (Figure 4). About 70% of all LWD was in the smaller two diameter classes (>35% 10-19cm; and >30% 20-29cm; Figure 4 Panel A). Likewise, >50% of the LWD was between 1m and 4m in length (Figure 4, Panel B). Both diameter measures and tree length measures demonstrated a decreasing exponential curve (Figure 4). Together, well over 50% of the LWD across all stream reaches consisted of pieces <30cm in diameter and <4m in length. However as in other studies, we found that the large pieces played the primary role in stream bed configuration and the formation of aggregates. (Discussed at greater length below).

Other studies have found that LWD attachment to one or both banks and/or the presence of the tree's rootwad are important factors influencing the stability (i.e., the resistance to being moved during flood) and orientation of the LWD piece (Bestcha and Platts 1986, Ralph et al. 1996). We found attachment to one or both banks and the numbers of pieces that had rootwads to be highly variable; commensurate with the high variation in LWD between stream reaches (Tables 2 and 3). However, we did find interesting relationships between the orientation of the LWD piece (Table 4) the percentage attached to one or both banks, the volume of the LWD piece, and the length of the piece (Figure 5).

Table 2. Volume, attachment, and with or without a connected rootwad of LWD among the study reaches.

| Stream Name | Reach | Frequency (no) | Volume (m3) | Attachment | | Rootwad | |
|---|---|---|---|---|---|---|---|
| | | | | attached | unattached | WITHOUT | WITH |
| Ole Creek | A | 13 | 20.6 | 5 | 8 | 7 | 6 |
| | B | 29 | 25.9 | 17 | 12 | 27 | 2 |
| | C | 32 | 58.7 | 7 | 25 | 25 | 7 |
| Nyack Creek | A | 7 | 1.6 | 1 | 6 | 7 | 0 |
| | B | 5 | 12.0 | 2 | 3 | 4 | 1 |
| Red Meadow C | A | 51 | 82.4 | 35 | 16 | 42 | 9 |
| | B | 123 | 212.1 | 95 | 28 | 115 | 8 |
| Whale Creek | A | 56 | 57.2 | 26 | 30 | 55 | 1 |
| | B | 87 | 77.5 | 37 | 50 | 87 | 0 |
| | C | 91 | 116.8 | 59 | 32 | 74 | 17 |
| Coal Creek | A | 123 | 119.0 | 57 | 66 | 119 | 4 |
| | B | 36 | 51.0 | 19 | 17 | 34 | 2 |
| Young's Creek | A | 184 | 200.6 | 90 | 94 | 157 | 27 |
| | B | 77 | 53.2 | 49 | 28 | 62 | 15 |
| | C | 37 | 38.5 | 17 | 20 | 32 | 5 |
| Jim Creek | A | 117 | 172.3 | 72 | 45 | 99 | 18 |
| | B | 46 | 38.8 | 35 | 11 | 44 | 2 |
| Goat Creek | A | 61 | 41.4 | 31 | 30 | 53 | 8 |
| | B | 70 | 60.3 | 49 | 21 | 64 | 6 |
| | C | 75 | 177.3 | 54 | 21 | 55 | 20 |



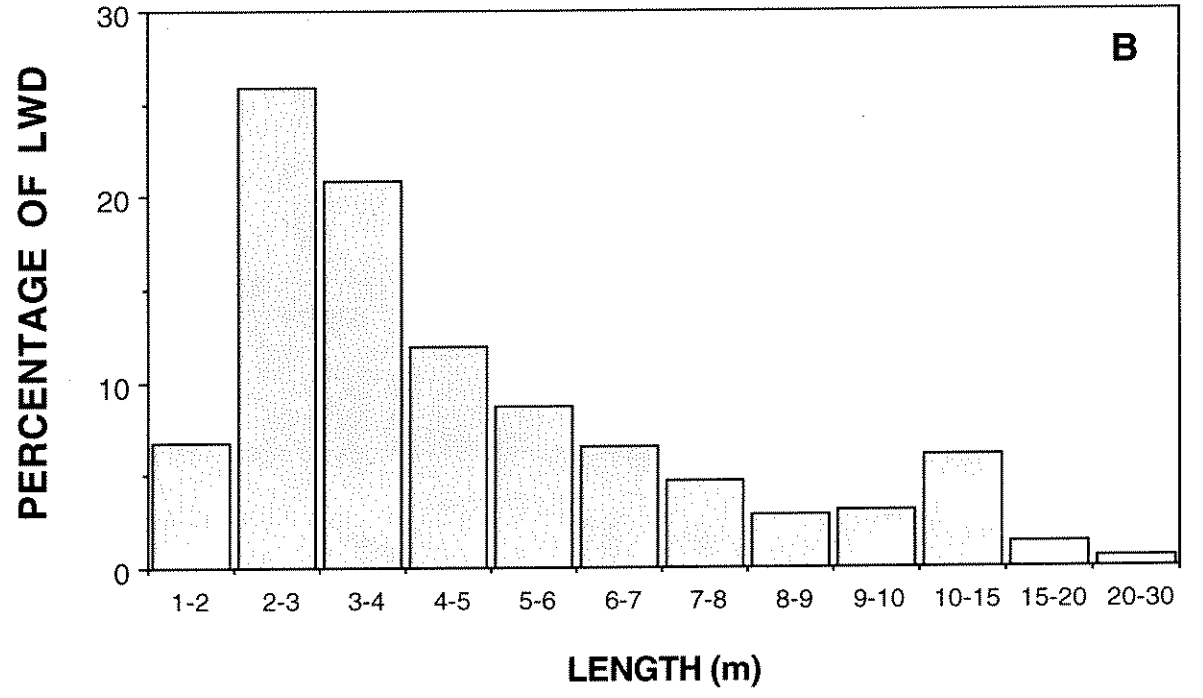




Figure 4. (Panel A) The percent of Large Woody Debris in each of 8 diameter size classes. (Panel B) The percent of Large Woody Debris in each of 12 length size classes.

Table 3. Position of LWD in each study stream reach by diameter class and whether it is in contact with the stream banks.

| Flathead River Drainage | Stream Name | Drainage area (acres) | Reach | POSITION: No contact with banks by Diameter Class | | | | Contacting one bank by Diameter Class | | | | Contacting both banks by Diameter Class | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Middle Fork | Ole Creek | 25429 | A | 2 | 0 | 0 | 1 | 2 | 3 | 2 | 3 | 0 | 0 | 0 | 0 |
| | | | B | 5 | 3 | 2 | 4 | 7 | 5 | 1 | 2 | 0 | 0 | 0 | 0 |
| | | | C | 3 | 6 | 1 | 4 | 5 | 5 | 3 | 5 | 0 | 0 | 0 | 0 |
| | Nyack Creek | 54353 | A | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | B | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| North Fork | Red Meadow Creek | 3982 | A | 4 | 7 | 2 | 7 | 4 | 9 | 7 | 9 | 0 | 1 | 1 | 0 |
| | | | B | 7 | 21 | 10 | 13 | 9 | 19 | 13 | 30 | 0 | 0 | 0 | 1 |
| | Whale Creek | 24296 | A | 14 | 14 | 1 | 0 | 13 | 7 | 4 | 3 | 0 | 0 | 0 | 0 |
| | | | B | 19 | 12 | 6 | 1 | 20 | 18 | 8 | 3 | 0 | 0 | 0 | 0 |
| | | | C | 15 | 19 | 9 | 6 | 14 | 15 | 8 | 5 | 0 | 0 | 0 | 0 |
| | Coal Creek | 29920 | A | 44 | 24 | 5 | 4 | 16 | 17 | 4 | 6 | 0 | 2 | 1 | 0 |
| | | | B | 9 | 4 | 3 | 1 | 8 | 3 | 2 | 5 | 0 | 1 | 0 | 0 |
| South Fork | Young's Creek | 57523 | A | 56 | 37 | 20 | 14 | 14 | 18 | 13 | 10 | 1 | 1 | 0 | 0 |
| | | | B | 11 | 7 | 2 | 5 | 24 | 13 | 6 | 9 | 0 | 0 | 0 | 0 |
| | | | C | 15 | 7 | 3 | 5 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| Swan River | Jim Creek | 9151 | A | 23 | 22 | 8 | 6 | 11 | 16 | 7 | 14 | 1 | 3 | 4 | 2 |
| | | | B | 7 | 2 | 0 | 0 | 17 | 8 | 1 | 5 | 1 | 0 | 3 | 1 |
| | Goat Creek | 13837 | A | 11 | 6 | 3 | 4 | 10 | 12 | 3 | 5 | 0 | 4 | 1 | 2 |
| | | | B | 19 | 11 | 4 | 5 | 12 | 8 | 1 | 7 | 0 | 2 | 0 | 1 |
| | | | C | 11 | 9 | 3 | 9 | 7 | 5 | 6 | 11 | 2 | 3 | 1 | 8 |

Diameter Classes: 1 = 10-20cm; 2 = 20-30cm; 3 = 30-40cm; 4 = >40cm

Table 4. Orientation of LWD in the study streams by diameter class.

| Flathead River Drainage | Stream Name | Drainage area (acres) | Reach | ORIENTATION | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 degrees by Diameter class | | | | 45 degrees by Diameter class | | | | 90 degrees by Diameter class | | | |
| | | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Middle Fork | Ole Creek | 25429 | A | 1 | 0 | 1 | 0 | 2 | 3 | 1 | 4 | 1 | 0 | 0 | 0 |
| | | | B | 4 | 3 | 0 | 1 | 4 | 3 | 2 | 3 | 4 | 2 | 1 | 2 |
| | | | C | 4 | 6 | 3 | 4 | 3 | 4 | 1 | 1 | 1 | 1 | 0 | 4 |
| | Nyack Creek | 54353 | A | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | B | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| North Fork | Red Meadow Creek | 3982 | A | 2 | 4 | 5 | 4 | 3 | 3 | 2 | 4 | 3 | 10 | 3 | 8 |
| | | | B | 3 | 7 | 1 | 4 | 5 | 18 | 9 | 12 | 8 | 15 | 13 | 28 |
| | Whale Creek | 24296 | A | 13 | 19 | 3 | 1 | 10 | 2 | 2 | 2 | 4 | 0 | 0 | 0 |
| | | | B | 19 | 14 | 6 | 3 | 18 | 13 | 6 | 1 | 2 | 3 | 2 | 0 |
| | | | C | 13 | 14 | 14 | 5 | 11 | 13 | 3 | 1 | 5 | 7 | 0 | 5 |
| | Coal Creek | 29920 | A | 33 | 20 | 3 | 4 | 17 | 17 | 6 | 6 | 10 | 6 | 1 | 0 |
| | | | B | 7 | 2 | 2 | 3 | 5 | 2 | 0 | 1 | 5 | 4 | 3 | 2 |
| South Fork | Young's Creek | 57523 | A | 16 | 16 | 8 | 5 | 43 | 29 | 20 | 9 | 12 | 10 | 5 | 9 |
| | | | B | 11 | 7 | 2 | 1 | 20 | 9 | 3 | 10 | 4 | 4 | 2 | 3 |
| | | | C | 6 | 4 | 0 | 4 | 9 | 4 | 4 | 0 | 3 | 2 | 0 | 1 |
| Swan River | Jim Creek | 9151 | A | 9 | 8 | 2 | 3 | 19 | 19 | 8 | 8 | 7 | 14 | 9 | 11 |
| | | | B | 7 | 3 | 0 | 2 | 13 | 7 | 1 | 2 | 5 | 0 | 3 | 2 |
| | Goat Creek | 13837 | A | 6 | 7 | 1 | 2 | 6 | 2 | 2 | 1 | 9 | 13 | 4 | 8 |
| | | | B | 15 | 5 | 3 | 3 | 9 | 7 | 1 | 4 | 7 | 9 | 1 | 6 |
| | | | C | 4 | 5 | 2 | 4 | 7 | 3 | 4 | 8 | 9 | 9 | 4 | 16 |

Diameter Classes: 1 = 10-20cm; 2 = 20-30cm; 3 = 30-40cm; 4 = >40cm

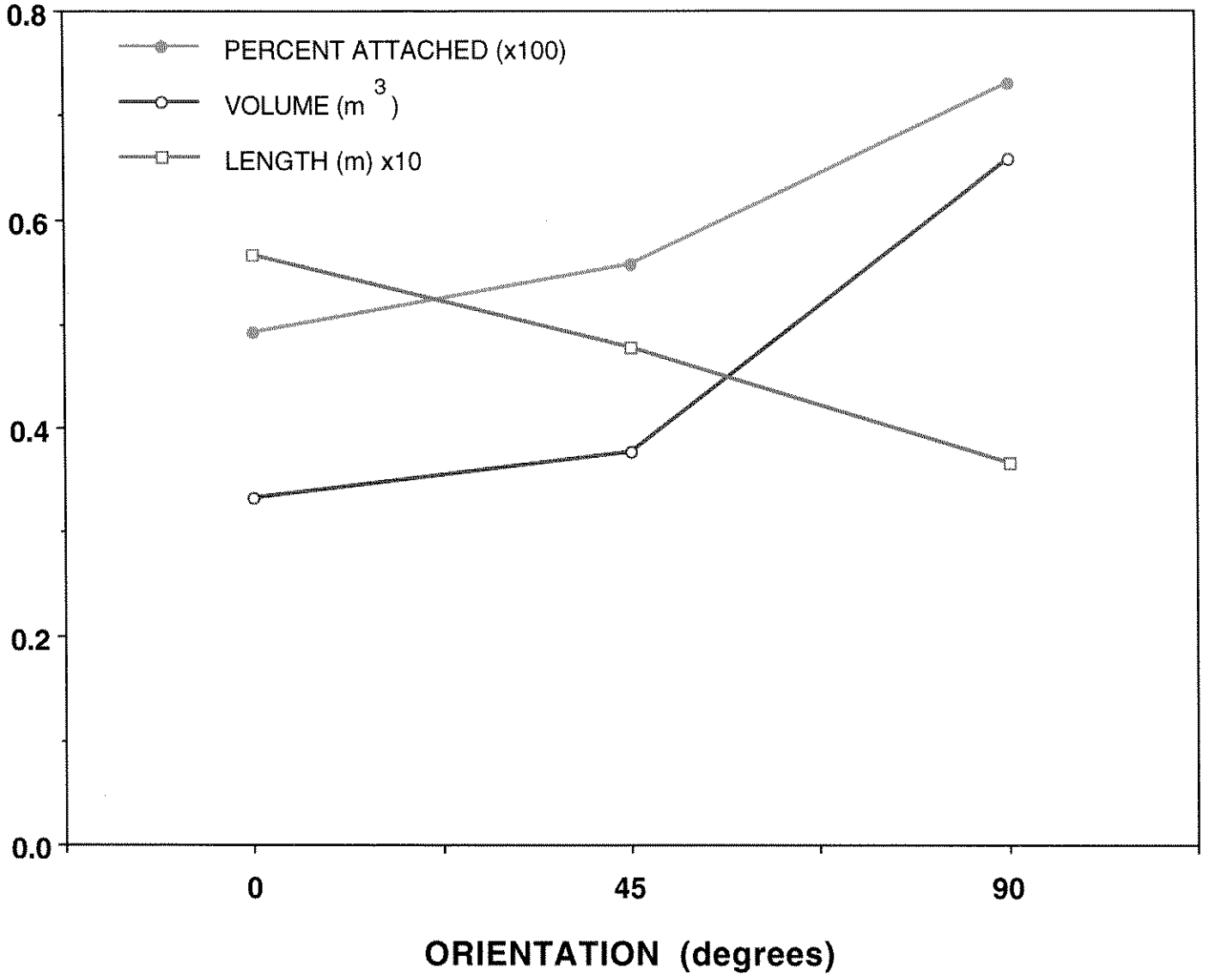



Figure 5. Among all stream reaches combined, the mean percent attached, the mean volume and the mean length of Large Woody Debris oriented at 0 degrees (parallel), 45 degrees, or 90 degrees (perpendicular) to the stream current.

Among all LWD pieces from all reaches combined, those oriented at a 90° angle to the current (i.e., perpendicular to the thalweg) had a much higher frequency of attachment to a bank and had a larger volume than those pieces that were at either a 45° angle or parallel to the stream flow. We found that bank attachment often extended a considerable distance onto the bank and back into the riparian vegetation. These pieces were often the most stable and demonstrated resistance to change in orientation.

There was also a significant trend in decreasing stem length among LWD pieces that were parallel vs. perpendicular to the flow. This is likely due to longer pieces being subject to rotation around an anchor point, such as a bank attachment, during flooding when stream power and floatation of the LWD is at it highest. To summarize, those pieces that were at a 90° angle to the current tended to be attached to at least one of the banks and tended to be large diameter and short. These features are particularly important since 90° angle pieces are the most interactive with the stream channel and tend to be most responsible for change in streambed morphology and complexity.

We also examined the relationship of LWD wood decay (Table 5). We found that among all stream reaches most LWD was in Stage 2 decay class; that is, most pieces had been stripped of their bark and branches and showed only the earliest signs of rotting at the surface. This finding has a couple of implications: 1) that most of the wood has been in the stream for at least several years, long enough to loose the outer bark and limbs, but not so long as to enter advanced decay stages, 2) the paucity of Stage 3 and 4 decay classes suggests that once a LWD piece enters latter stages of decay decomposition processes occur rapidly. The later stages of decay may be significantly enhanced during spring runoff as increased stream

Table 5. Decay class of LWD, by diameter class, in the study streams.

| Flathead Rive Drainage | Stream Name | Drainage area (acres) | Reach | DECAY CLASS w/ bark&limbs by Diameter class 1 | 2 | 3 | 4 | Surface rotted by Diameter class 1 | 2 | 3 | 4 | Extensively rotted by Diameter class 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Middle Fork | Ole Creek | 25429 | A | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 4 | 0 | 0 | 0 | 0 |
| | | | B | 6 | 2 | 0 | 1 | 6 | 6 | 3 | 5 | 0 | 0 | 0 | 0 |
| | | | C | 2 | 1 | 0 | 2 | 6 | 10 | 4 | 7 | 0 | 0 | 0 | 0 |
| | Nyack Creek | 54353 | A | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | B | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| North Fork | Red Meadow Creek | 3982 | A | 0 | 1 | 0 | 0 | 8 | 16 | 10 | 16 | 0 | 0 | 0 | 0 |
| | | | B | 0 | 0 | 0 | 0 | 16 | 40 | 23 | 44 | 0 | 0 | 0 | 0 |
| | Whale Creek | 24296 | A | 2 | 1 | 3 | 1 | 25 | 20 | 2 | 2 | 0 | 0 | 0 | 0 |
| | | | B | 5 | 4 | 2 | 0 | 34 | 26 | 12 | 4 | 0 | 0 | 0 | 0 |
| | | | C | 5 | 3 | 2 | 2 | 24 | 31 | 15 | 9 | 0 | 0 | 0 | 0 |
| | Coal Creek | 29920 | A | 13 | 13 | 2 | 2 | 45 | 28 | 6 | 8 | 2 | 2 | 2 | 0 |
| | | | B | 5 | 1 | 0 | 1 | 12 | 7 | 5 | 5 | 0 | 0 | 0 | 0 |
| South Fork | Young's Creek | 57523 | A | 2 | 2 | 1 | 2 | 69 | 54 | 32 | 22 | 0 | 0 | 0 | 0 |
| | | | B | 0 | 0 | 0 | 0 | 35 | 20 | 8 | 14 | 0 | 0 | 0 | 0 |
| | | | C | 1 | 1 | 0 | 1 | 17 | 9 | 4 | 4 | 0 | 0 | 0 | 0 |
| Swan River | Jim Creek | 9151 | A | 3 | 7 | 5 | 5 | 32 | 34 | 14 | 14 | 0 | 0 | 0 | 3 |
| | | | B | 5 | 0 | 3 | 2 | 20 | 9 | 1 | 3 | 0 | 1 | 0 | 1 |
| | Goat Creek | 13837 | A | 5 | 5 | 0 | 2 | 15 | 13 | 6 | 8 | 1 | 4 | 1 | 1 |
| | | | B | 12 | 5 | 0 | 9 | 19 | 13 | 4 | 4 | 0 | 3 | 1 | 0 |
| | | | C | 6 | 4 | 2 | 12 | 14 | 13 | 8 | 13 | 0 | 0 | 0 | 3 |

Diameter Classes: 1 = 10-20cm; 2 = 20-30cm; 3 = 30-40cm; 4 = >40cm

power causes decomposed logs to break apart. We did not conduct tests that would permit us to age the LWD to directly determine to rate of decomposition; however, based on our knowledge of aggregate accumulations at many sites throughout the Flathead Basin we know of pieces that have been in streams for over 20 years and are showing no signs of surface decomposition. Thus, it appears that LWD may remain in these streams for very long time periods (e.g.., >50 years).

*LWD Influence on Streambed Morphology*

An important feature of stream habitat structure is the development and stability of streambed morphology. Streams that alternate between riffles, pools and runs provide complex habitats for high biodiversity, biomass, and secondary production of aquatic insects and fishes. Likewise, complex variation in stream habitat and streambed morphology are frequently required for different life history stages and reproductive success among macroinvertebrates and fish species.

Using correlation analysis, we examined the role of LWD and its influence on streambed morphology. We found that as the number of pieces of LWD and the volume of LWD increased within a stream reach block (i.e., 10m section between transects) there was a corresponding increase in the negative slope of the reach immediately downstream (Figure 6). The most strongly negative bedslopes were all associated with upstream aggregates, large snags with rootwads, or large diameter LWD oriented perpendicular to the stream thalweg. Each of these LWD structures perform one or both of two important bedforming functions; 1) the retention of gravels on the upstream side of the structure, and/or 2) the focus of hydraulic flow and thus stream power on the downstream bed

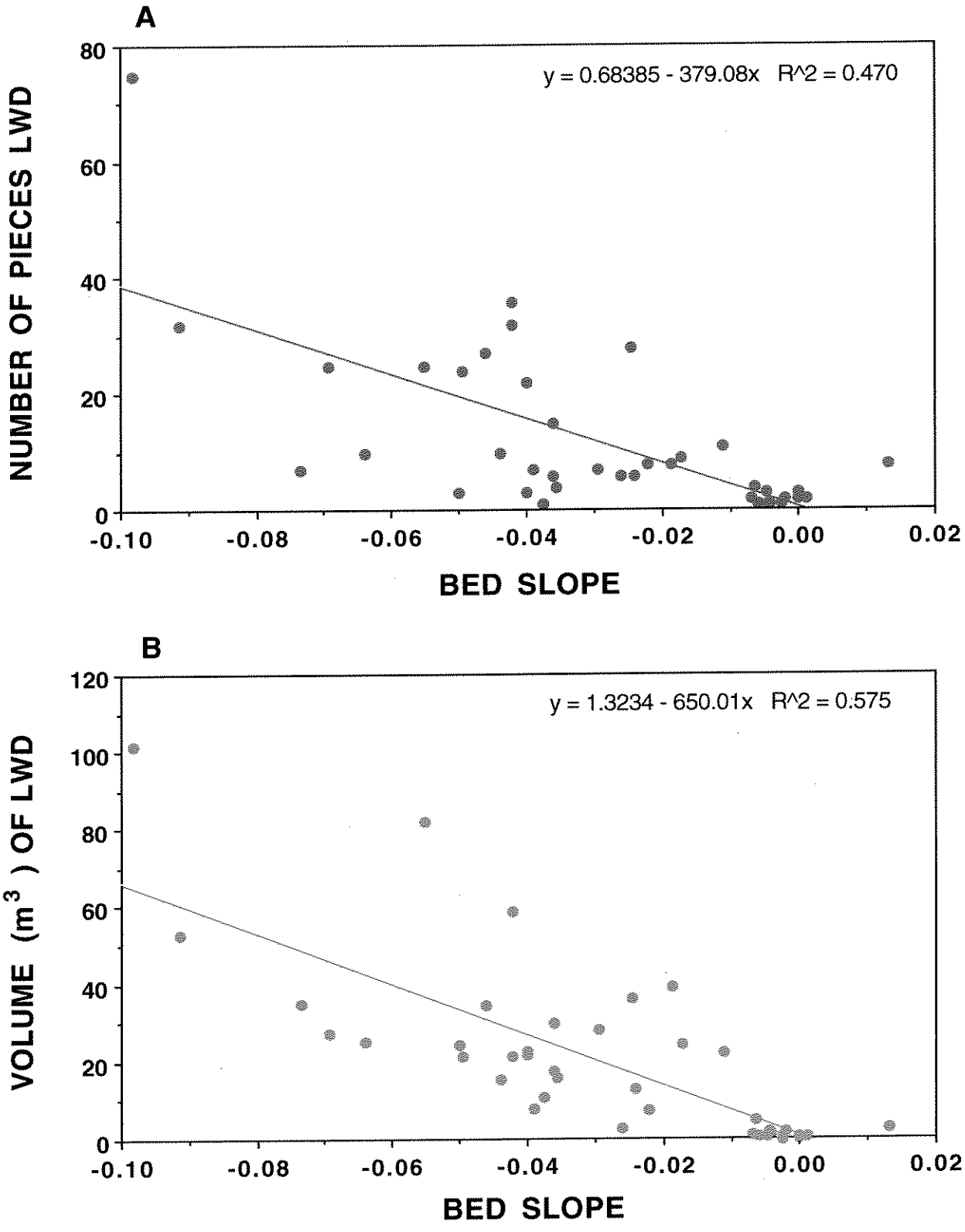



Figure 6. The number of pieces of Large Woody Debris (Panel A) and the volume of Large Woody Debris (Panel B) in the upstream 10 m reach block and the corresponding downstream bedslope.

material. Both of these factors lead to the aggredation of upstream gravel and cobble and the downstream degradation of bed material. Interestingly, the $r^2$ for LWD volume was much higher than that for frequency of pieces. This underscores the importance of large wood, and large wood within aggregates, to stabilize bedload, capture gravel, and promote pool formation.

*Land-use Influence on LWD*

Three of the 8 watersheds (8 of 20 study reaches) examined were located within Glacier Park or the Bob Marshall Wilderness. Each of these 3 watersheds are managed as wilderness and have never been harvested or roaded. The other 5 watersheds were in the North Fork or the Swan River drainages and flow through lands managed for multiple use, including timber harvest. Each of the 12 study reaches were sited down stream from harvested portions of the 5 watersheds.

We found that there was a linear relationship between large LWD (dia. $\geq$30cm) and small LWD (dia. <30cm) among the reaches draining wilderness areas (Figure 7), with a remarkably small variance in the relationship ($r^2$ = 0.977). In contrast, among reaches in watersheds with upstream harvest the large to small LWD size relationship was highly scattered and not significantly different from zero ($r^2$ = 0.032). These data suggest that there is a highly predictable and relatively stable relationship between the frequency of large diameter trees and small diameter trees entering the LWD pool in unharvested watersheds, independent of the total number of LWD pieces present. Among the watersheds with timber harvest we noted that three of the four data points (Figure 7, blue) located above the regression line of the unharvested watersheds Figure 7, red)

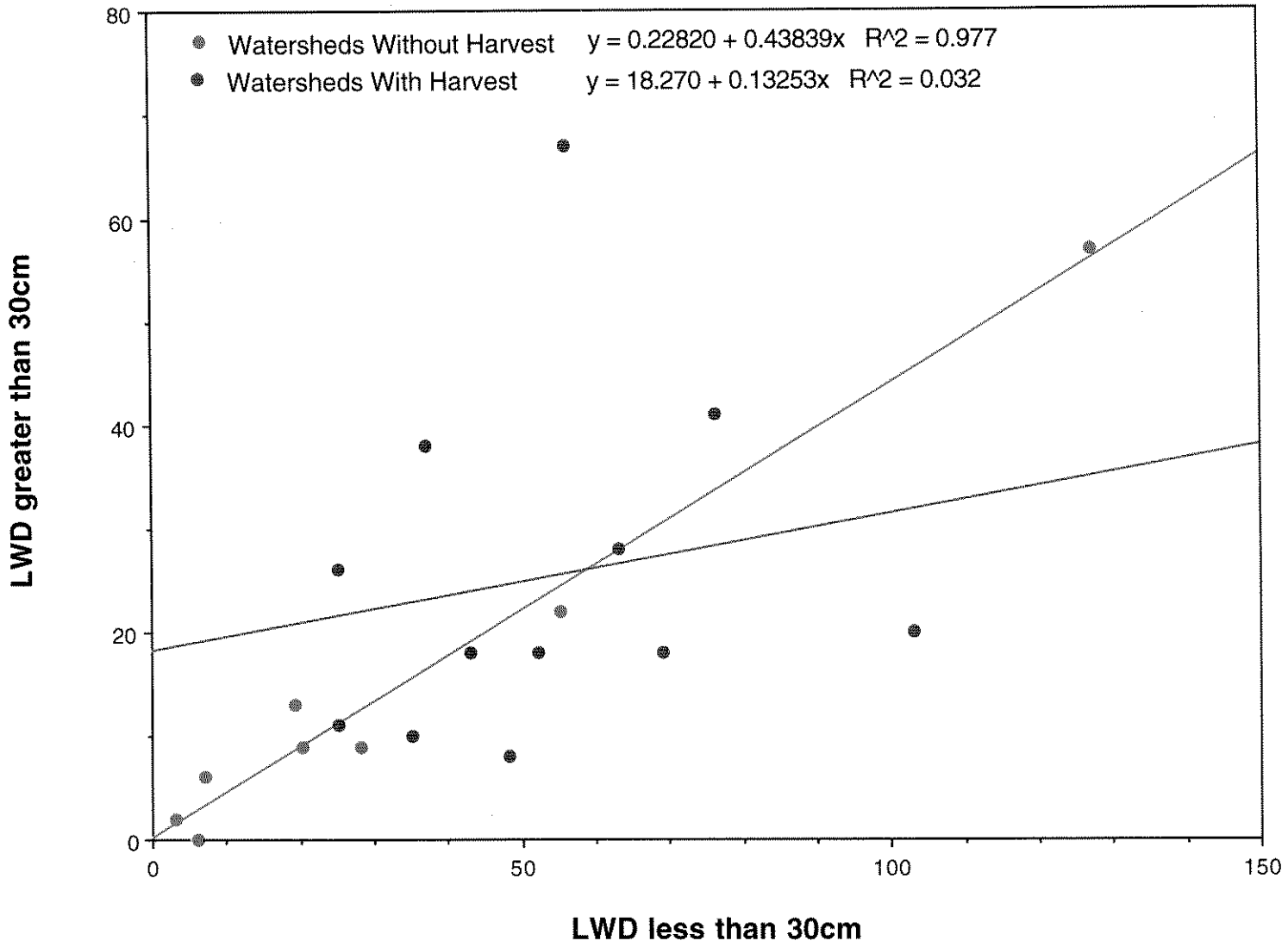



Figure 7. The frequency of large diameter (>30 cm) vs. the frequency of small diameter (< 30 cm) Large Woody Debris among study stream reaches in watersheds without harvest (red) and in watersheds with harvest (blue).

were among reaches with extensive riparian zone harvest (i.e., had more large diameter LWD than predicted among unharvested watershed reaches). The highest value as well as highest ratio of large to small LWD (67:56) occurred in Red Meadow Creek (Reach B) where the riparian forest had been clearcut approximately 20 years previous.

Although it would require additional, very focused study to determine the cause and effect relationship of what might lead to increased large wood input into reaches associated with riparian harvest (as well as detailed investigation into the specific history of each riparian cutting unit), the relationship may be driven by either direct or indirect harvest activities. Regardless of whether these are direct actions, (e.g., direct cutting of large diameter trees), that result in LWD input to the stream rather than removed from the site, or indirect forces (e.g., post harvest blowdown) they both result in departures from natural relationships.

We also examined the relationship of attachment of LWD to the stream bank among reaches in unharvested watersheds Vs watersheds with harvest. Again we found that among watersheds without harvest there was a relatively close relationship ($r^2$ = 0.875) between the frequency of attached vs. unattached LWD and a highly scattered relationship among watersheds with harvest (Figure 8). It is not clear what driving mechanisms may be leading to these relationships; however, within this same comparative structure we examined the relationship between the frequency of LWD pieces with and without rootwads. Again, among the reaches in unharvested watersheds there was a linear relationship with low variance ($r^2$ = 0.912) and in contrast there was no

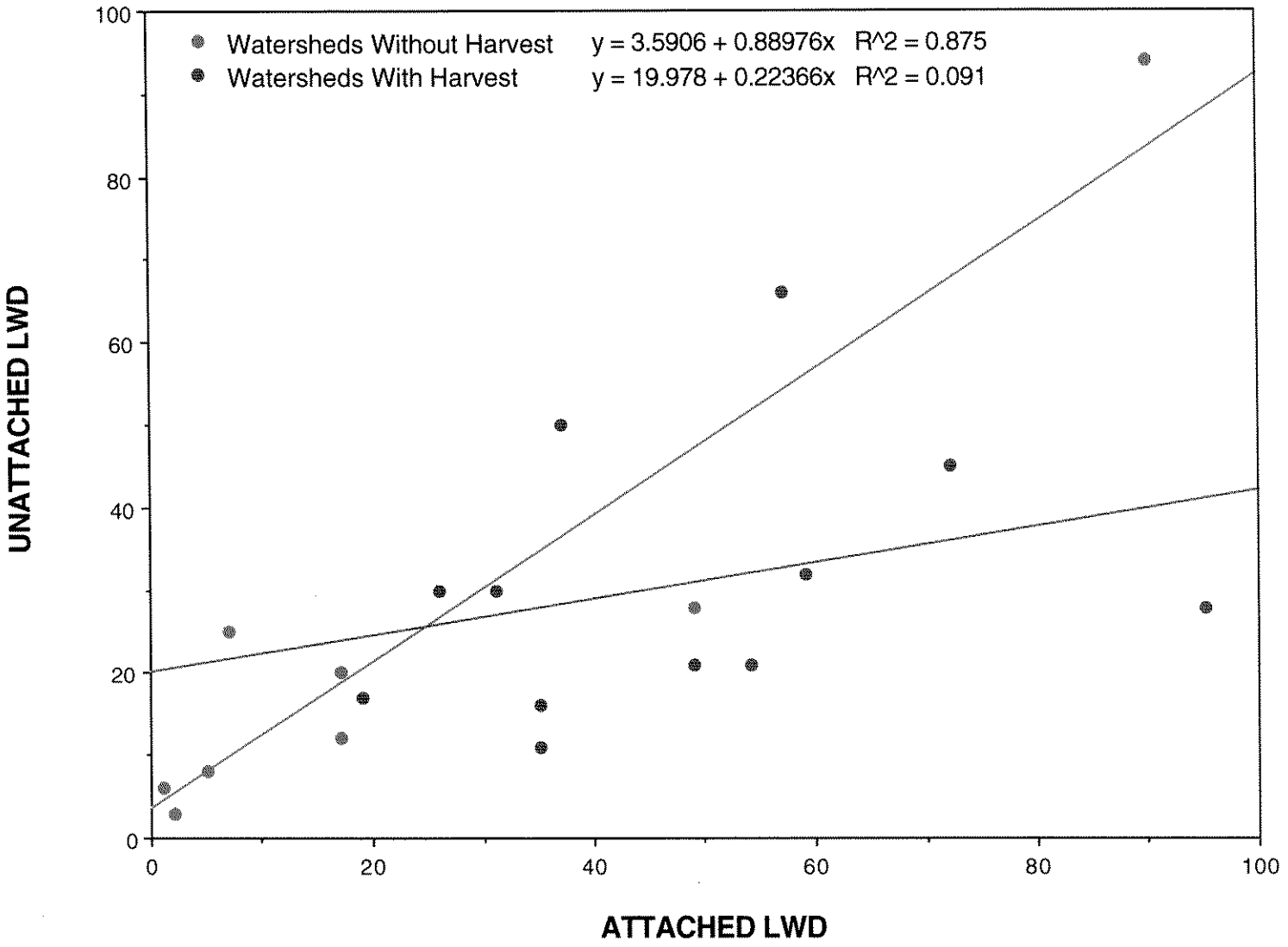



Figure 8. The frequency of attached vs. unattached Large Woody Debris among study stream reaches in watersheds without harvest (red) and in watersheds with harvest (blue).

linearity in the comparative relationship between LWD with and without rootwads among harvested watersheds (Figure 9).

We found these comparative relationships between harvested and unharvested watersheds to be quite remarkable. Although these data do not establish direct cause and effect relationships or mechanisms, they do illustrate an increased variance and loss of continuity among reaches in harvested watersheds.

*Implications for Watershed and Streamside Management*

We found that pool frequency and pool depth to stream width ratio increased with higher LWD abundance. We also found that pool frequency and depth were significantly related to large pieces of LWD that were oriented either perpendicular or at least at a 45° angle to the thalweg. This suggests that large, stable pieces within the bankfull stream channel are the primary influence promoting pool formation. In addition to large individual pieces, aggregates were also important structures adding to bedform and channel complexity. Many LWD pieces were oriented parallel to the thalweg and thus were generally much less interactive with the pool-forming stream flows. Thus, position, orientation and stability of a few pieces was more important than simply LWD frequency or volume. Grette (1985) and Richmond and Fausch (1995) also reported a significant positive relationship between LWD and the abundance of pools as well as the importance of relatively few, stable LWD pieces that accounted for most of the pool formation.

Wohl et al. (1993) reported that stream depth and gradient (stream power) and the resistance of bed and bank materials to erosion were important determinants of pool size. We observed a similar relationship

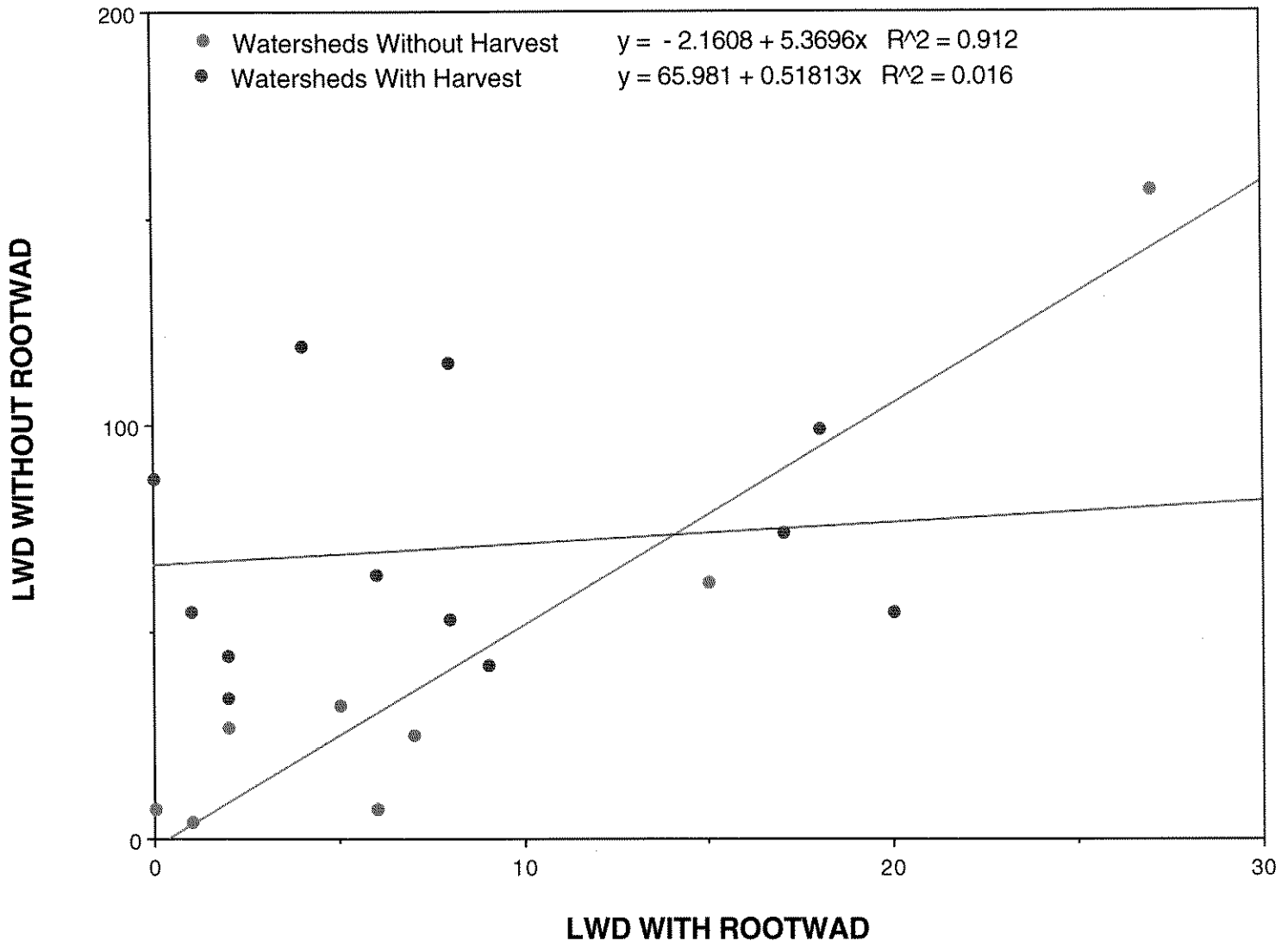



Figure 9. The frequency of Large Woody Debris with rootwad vs. without rootwad among study stream reaches in watersheds without harvest (red) and in watersheds with harvest (blue).

and with scour pools around aggregates in the largest streams (e.g., Young's Creek, Coal Creek).

LWD is an essential component in forming pools and overhead cover for fish. However, the relationship between stream size and power and the position and role played by LWD in the modification of bedform and channel development is a changing one. It is apparent from this study that large diameter, shorter pieces of LWD have a higher frequency of perpendicular orientation and thus a greater degree of pool forming interaction with stream flows. Likewise, as the stream increases in size there is increased requirement that LWD be associated with an aggregate to remain stable and interactive with the channel. Thus, the structure and function of LWD is largely determined by the interaction of piece diameter, length and position and the characteristics of the watershed and stream. These variables, in undisturbed stream systems, tend to be relatively linear in comparative relationships; however, become fairly unpredictable in streams that have been influenced by harvest. A detailed investigation into the specifics of various cutting histories would be necessary to determine how site prescriptions may affect the outcome of LWD to stream relationships.

The implications of this study for forest managers are twofold: 1) that with harvest comes increased unpredictability in the frequency of size, attachment, and stability of the LWD and 2) riparian zones without harvest may be essential to long term maintanence of natural stream morphology and habitat features. These issues will be critical for land managers attempting to prevent future detrimental environmental change or setting restoration goals for degraded bull trout spawning streams (c.f. Reeves et al. 1991).

(Figure 3) in which the streams of the larger drainages had the deepest pools, even though there was no significant difference in depth of riffles (i.e., minimum thalweg depths) between drainages. Other researchers have suggested that large streams and associated large river characteristics of gradient, stream power, maximum stream width, and maximum bankfull depth override the influence of channel modifying LWD (Andrus et al. 1988; Evans et al 1993). Our results support this suggestion since within the largest watershed streams, such as Young's Creek, pool forming LWD occurred almost exclusively as aggregates. In other words, as a stream get larger, in our study exemplified by Young's Creek, stream power, maximum stream width, and maximum bankfull depth override a threshold that is interactive with the maximum size of the riparian trees. Thus, large LWD along the coastal mountain streams of Washington and Oregon can remain interactive with the channel and pool forming in larger stream reaches than the large LWD in northern Rocky Mountain streams.

Robison and Bestcha (1990) and Richmond and Fausch (1995) showed that changing relationships between LWD and stream flow influenced pool types and that the majority of pools were formed by LWD spanning the channel perpendicular to flow. Richmond and Fausch (1995) found plunge and dammed pools to be the most prevalent pool type in the small subalpine streams of Colorado. Bilby and Ward (1989) found a similar pool types in smaller streams (<7m width) in southwestern Washington, but mainly scour pools in large streams (Bilby and Ward 1991). We found similar relationship among streams in the Flathead Basin where pools in the smaller streams (e.g., Goat Creek, Red Meadow Creek) were primarily associated with plunging or dammed water around LWD

and with scour pools around aggregates in the largest streams (e.g., Young's Creek, Coal Creek).

LWD is an essential component in forming pools and overhead cover for fish. However, the relationship between stream size and power and the position and role played by LWD in the modification of bedform and channel development is a changing one. It is apparent from this study that large diameter, shorter pieces of LWD have a higher frequency of perpendicular orientation and thus a greater degree of pool forming interaction with stream flows. Likewise, as the stream increases in size there is increased requirement that LWD be associated with an aggregate to remain stable and interactive with the channel. Thus, the structure and function of LWD is largely determined by the interaction of piece diameter, length and position and the characteristics of the watershed and stream. In undisturbed stream systems, these variables tend to be relatively linear, but become fairly unpredictable in streams that have been influenced by harvest (see Figures 7, 8, and 9). A detailed investigation into the specifics of various cutting histories would be necessary to determine how site prescriptions may affect the outcome of LWD to stream relationships.

The implications of this study for forest managers are twofold: 1) that with harvest comes increased unpredictability in the frequency of size, attachment, and stability of the LWD and 2) riparian zones without harvest may be essential to long term maintanence of natural stream morphology and habitat features. These issues will be critical for land managers attempting to prevent future detrimental environmental change or setting restoration goals for degraded bull trout spawning streams (c.f. Reeves et al. 1991).

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F-C 30

# APPENDIX A

# LARGE WOODY DEBRIS IN BULL TROUT SPAWNING STREAMS IN NORTHWEST MONTANA


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John T. Gangemi

and

Colden V. Baxter

Flathead Lake Biological Station

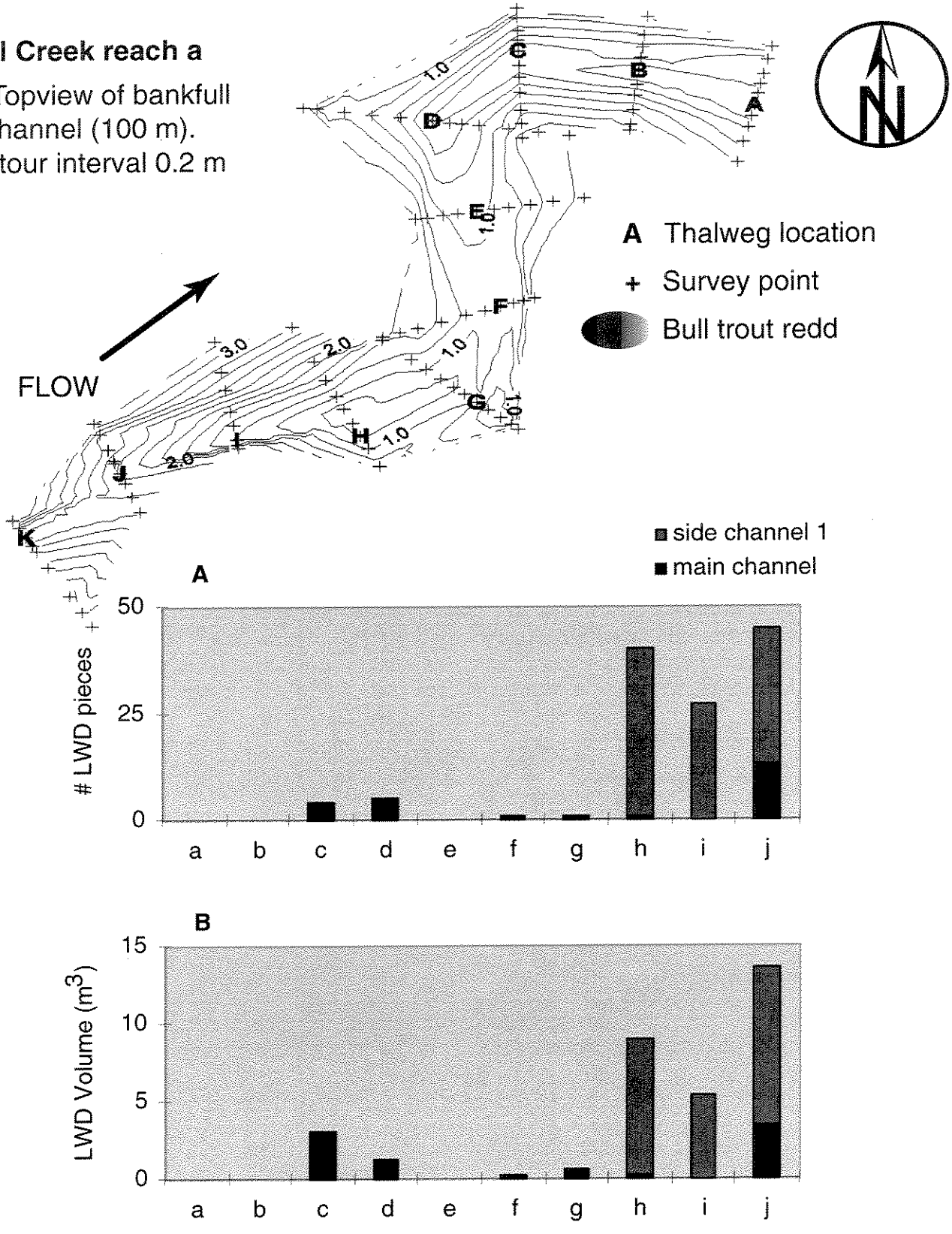
The University of Montana

311 BioStation Lane

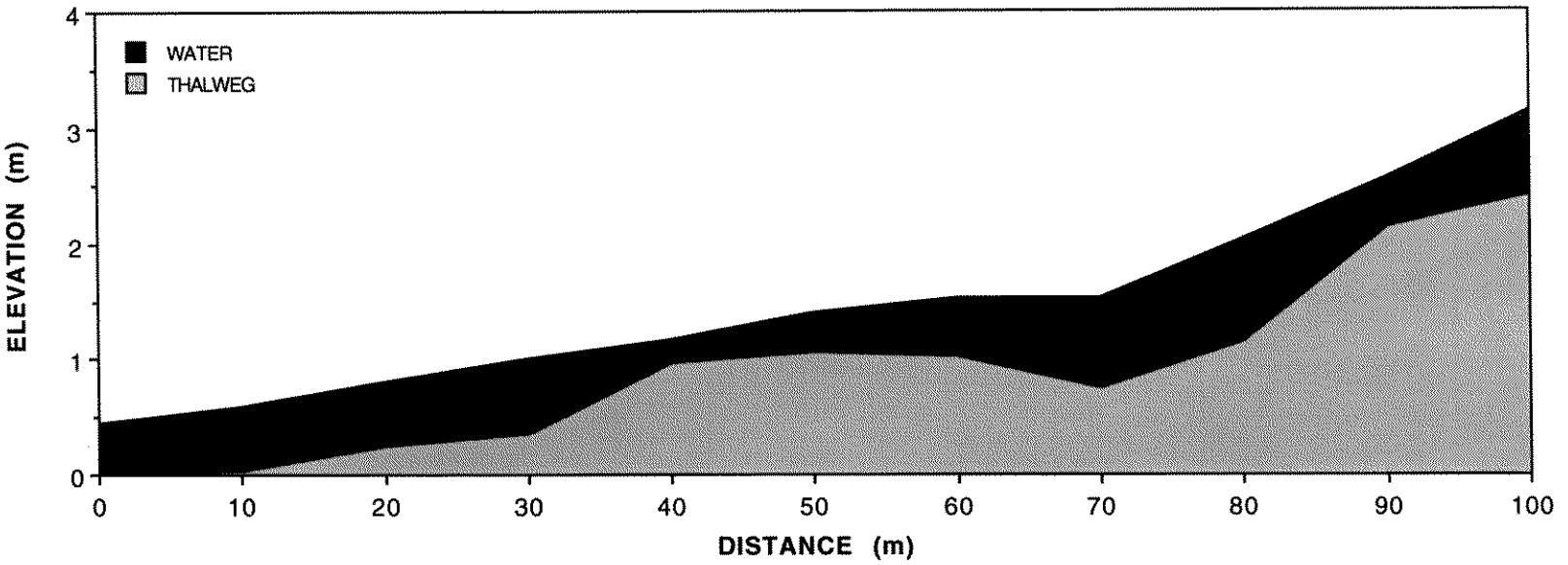
Polson, MT 59860

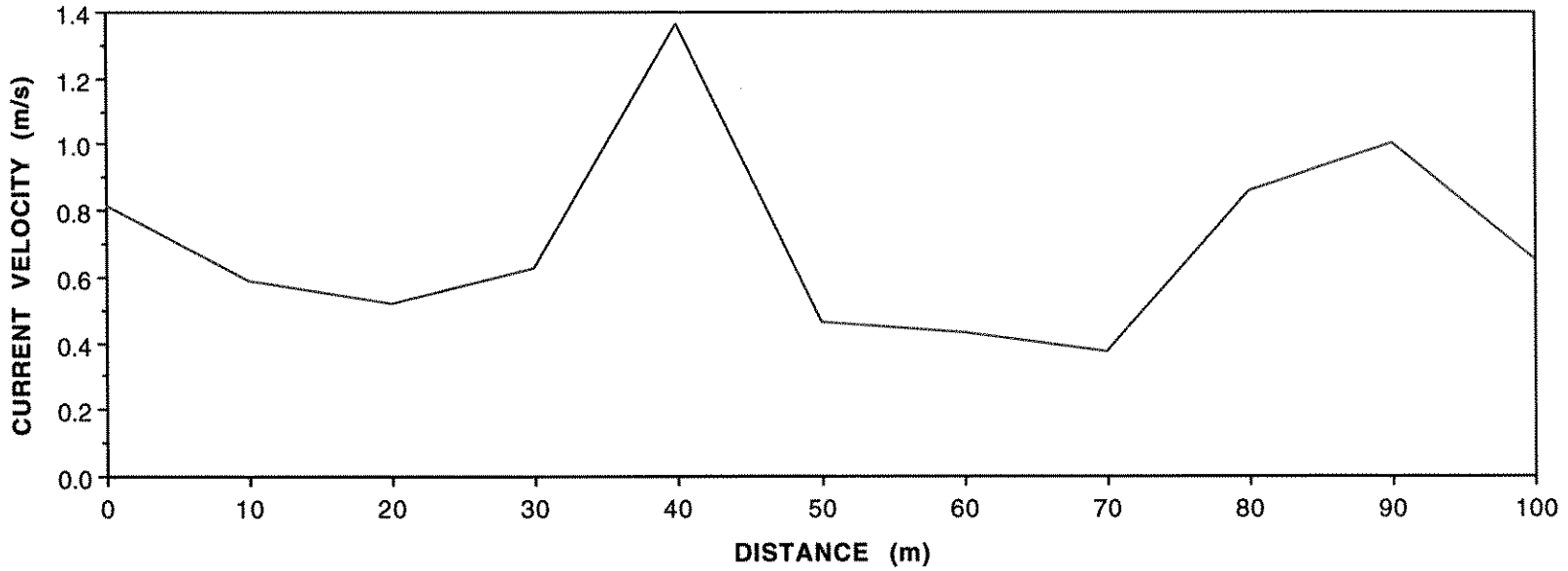
**Coal Creek reach a**

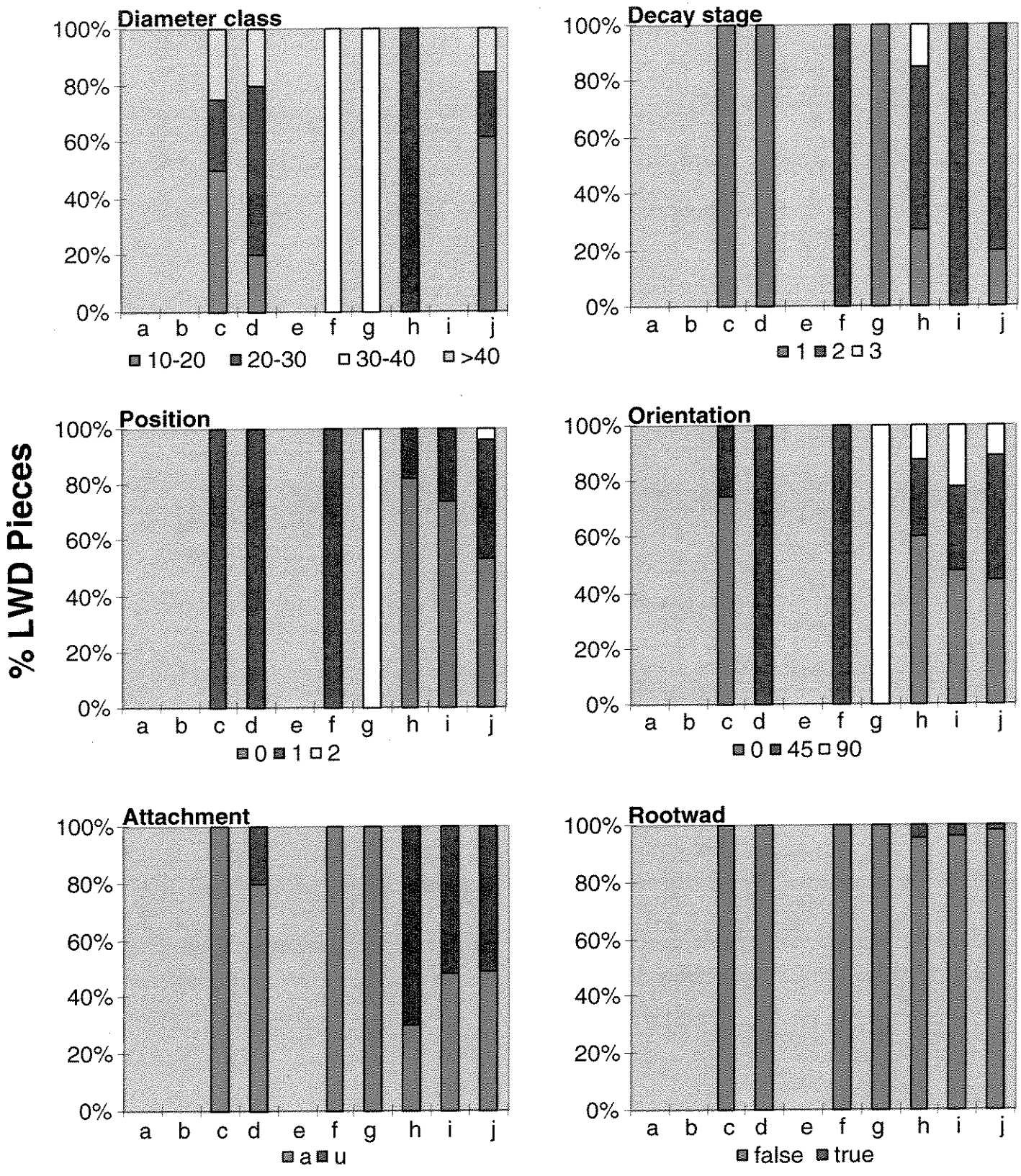
A: Topview of bankfull channel (100 m). contour interval 0.2 m



## Coal Creek Reach A

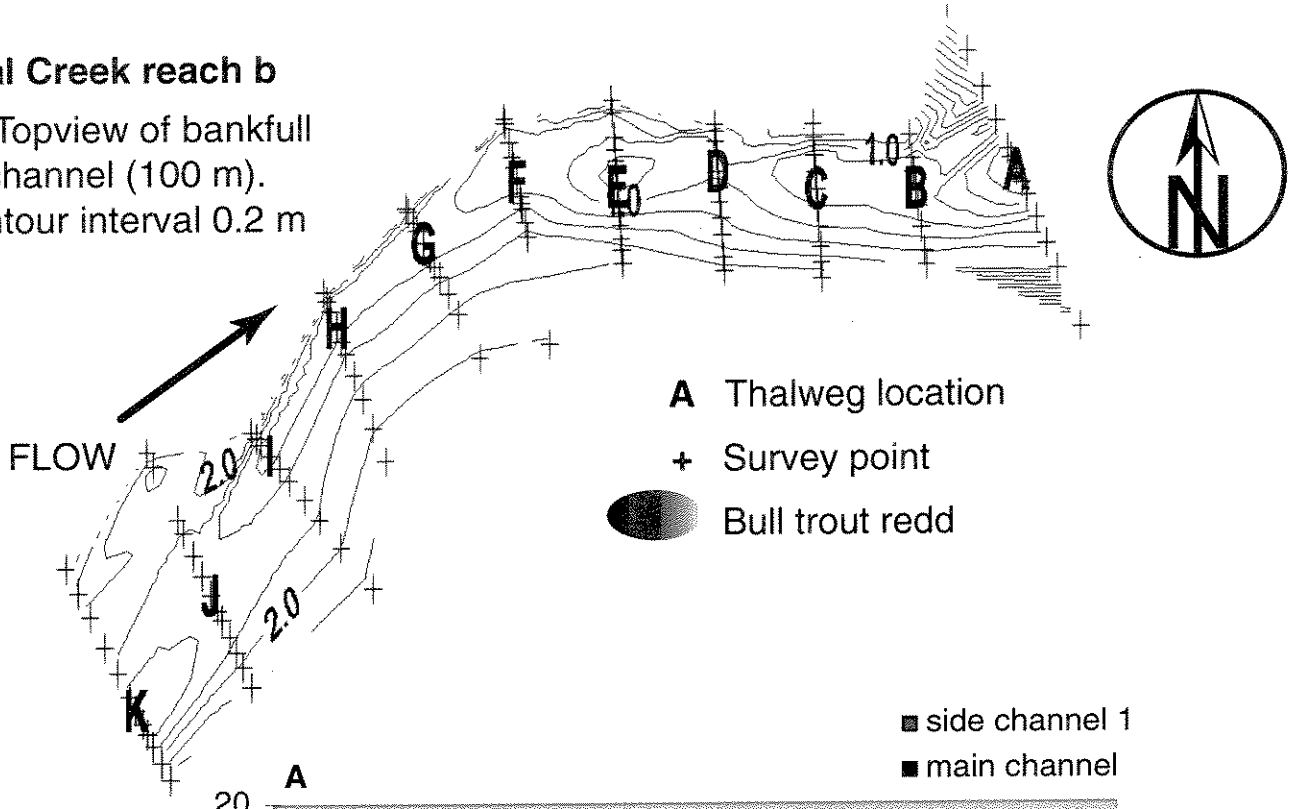


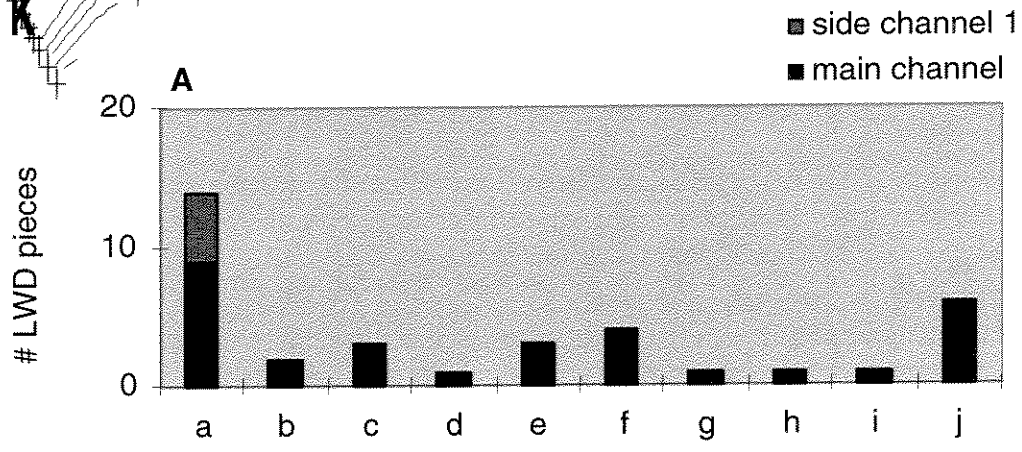



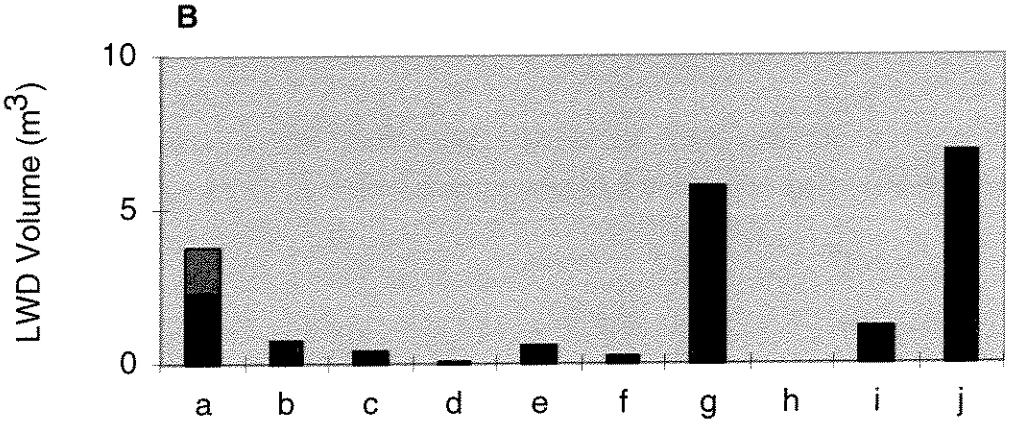

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Coal Creek reach b**

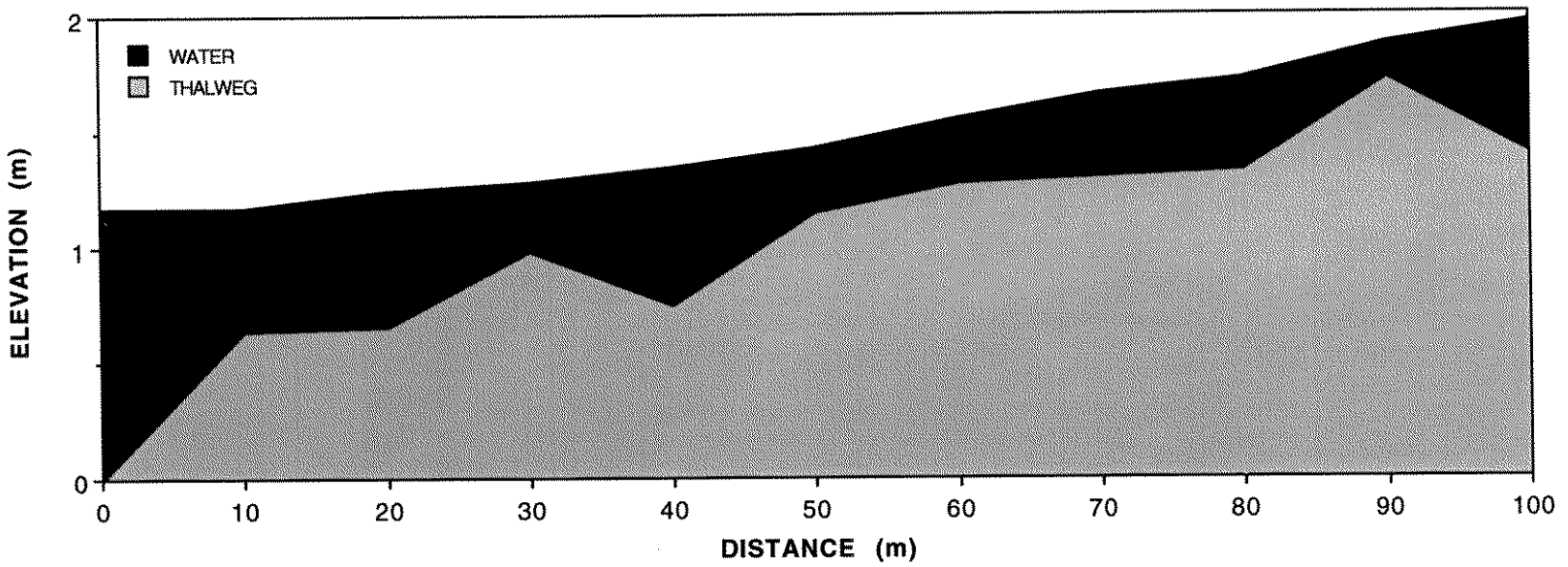
A: Topview of bankfull channel (100 m). contour interval 0.2 m

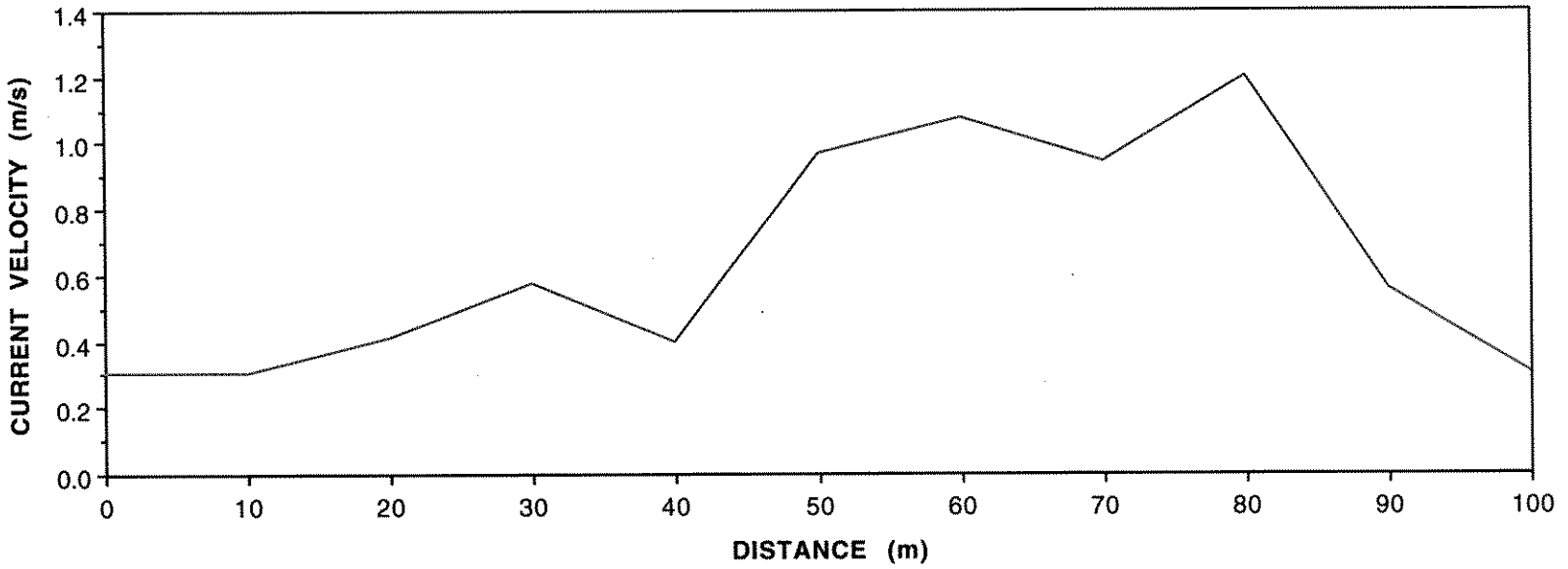


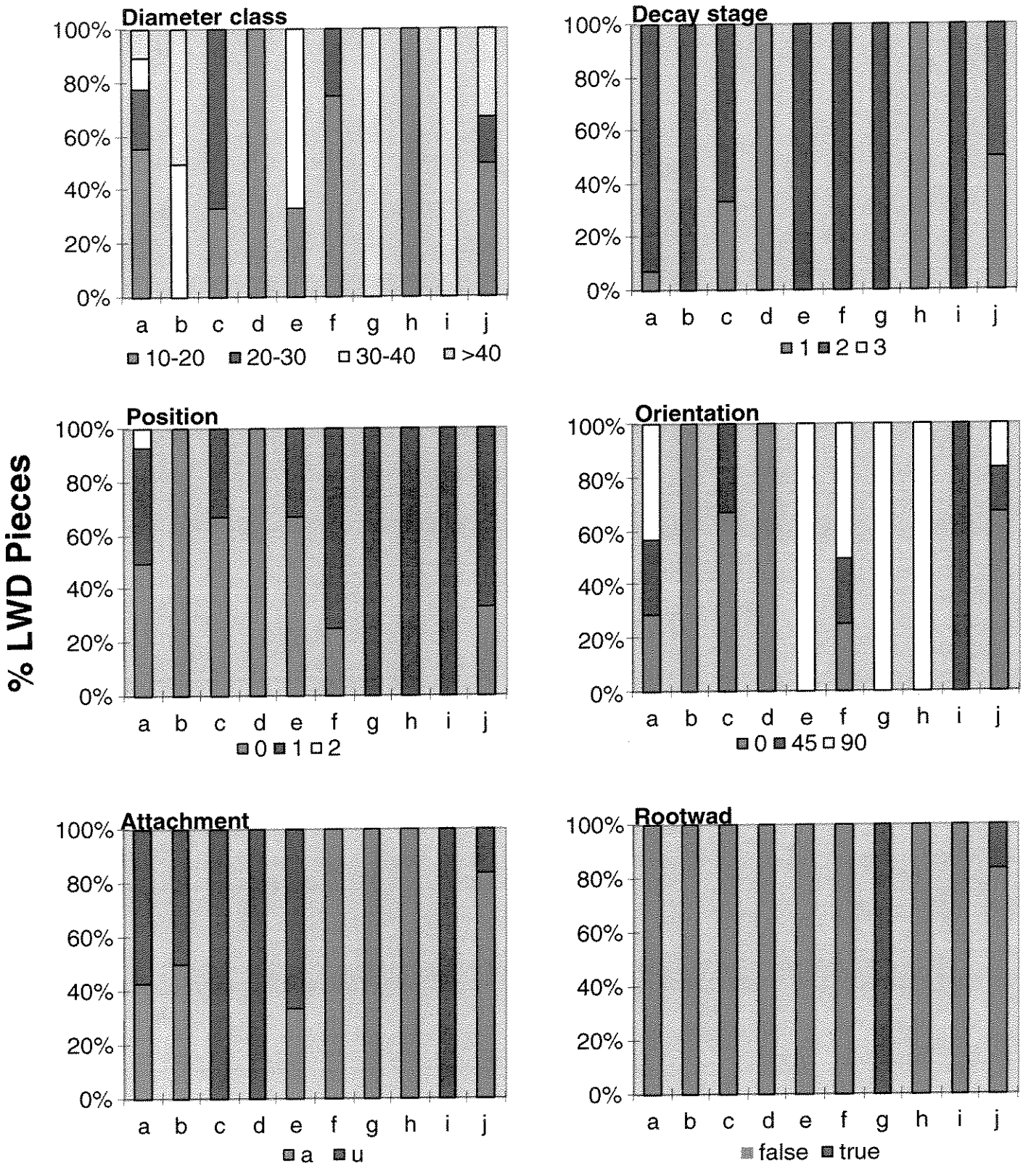



## Coal Creek Reach C

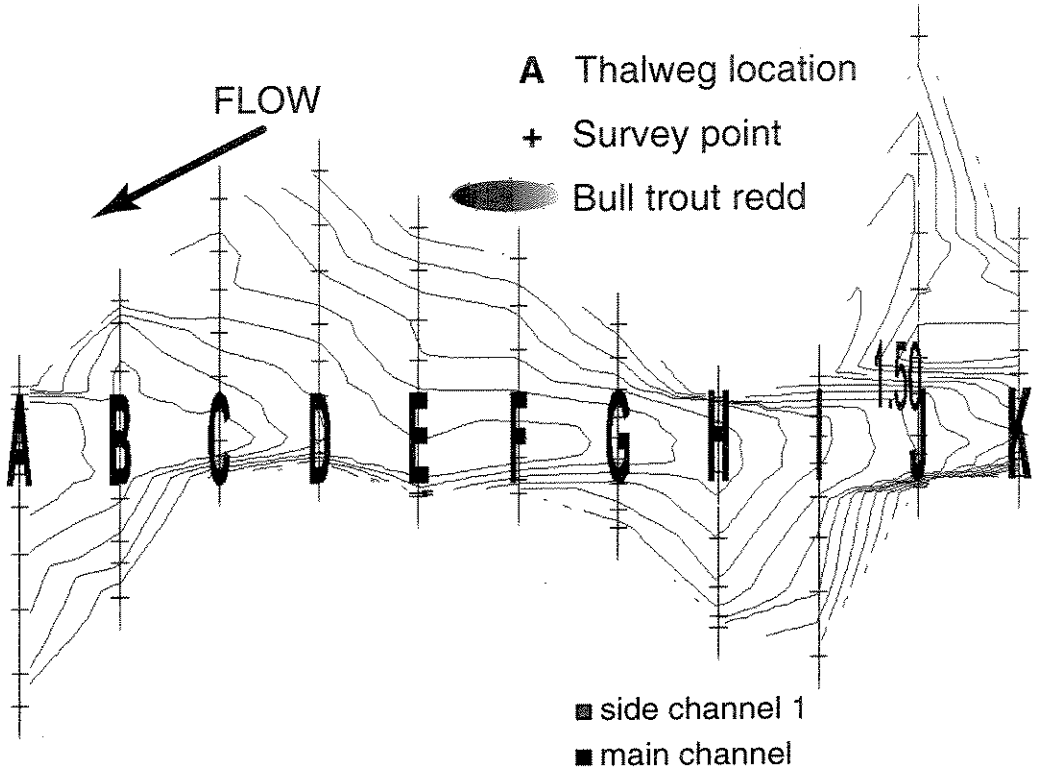


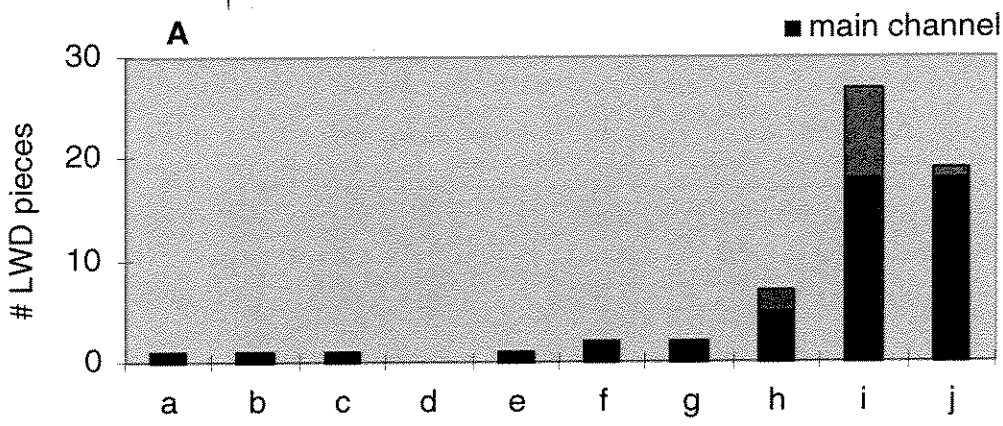



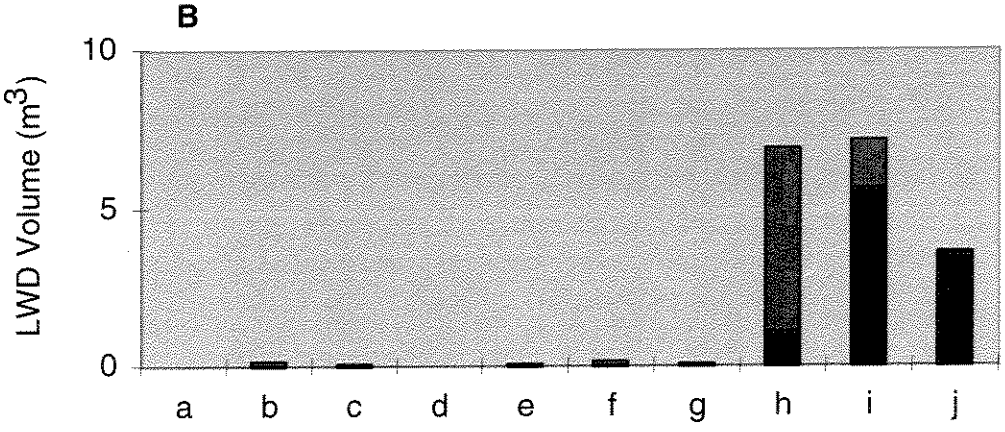

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Goat Creek reach a**

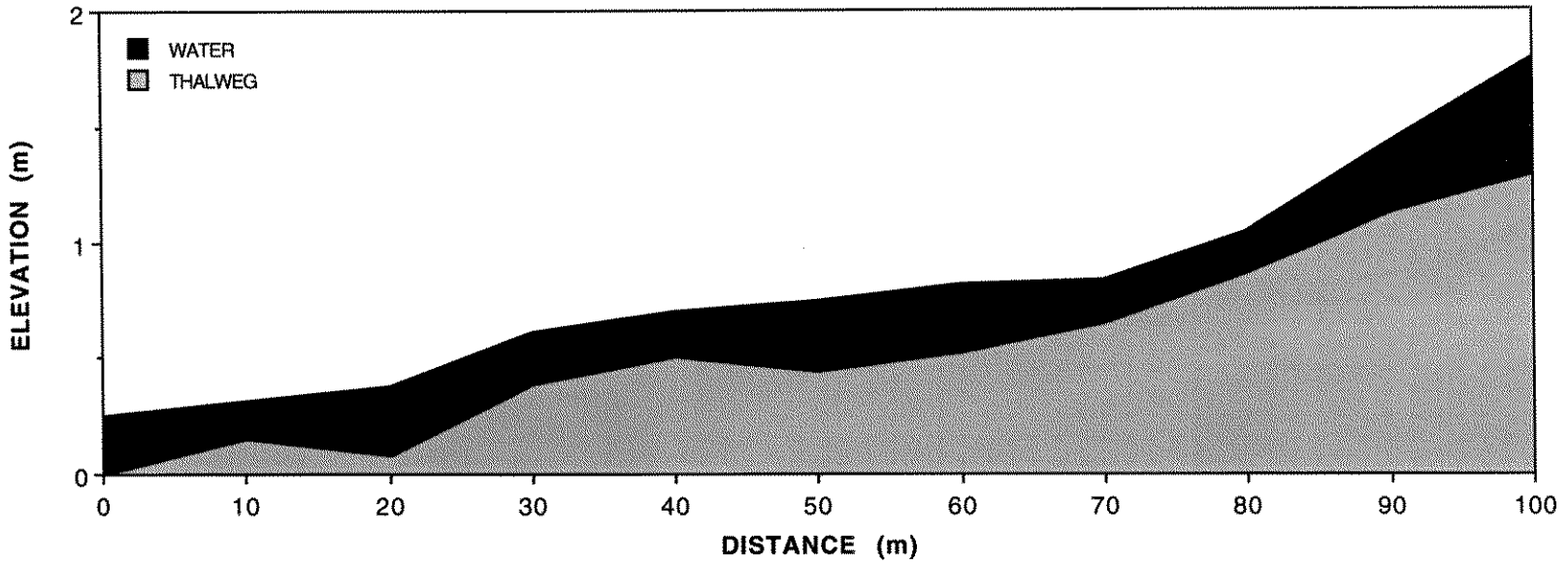
A: Topview of bankfull channel (100 m). contour interval 0.1 m

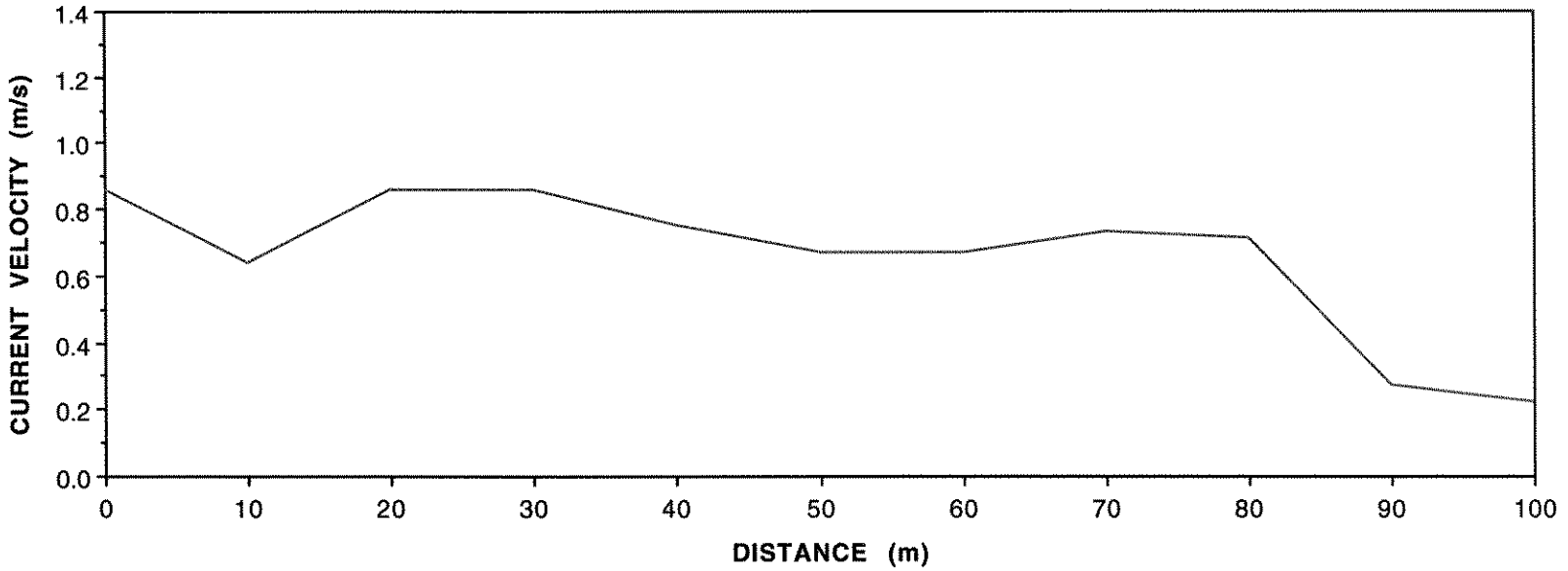


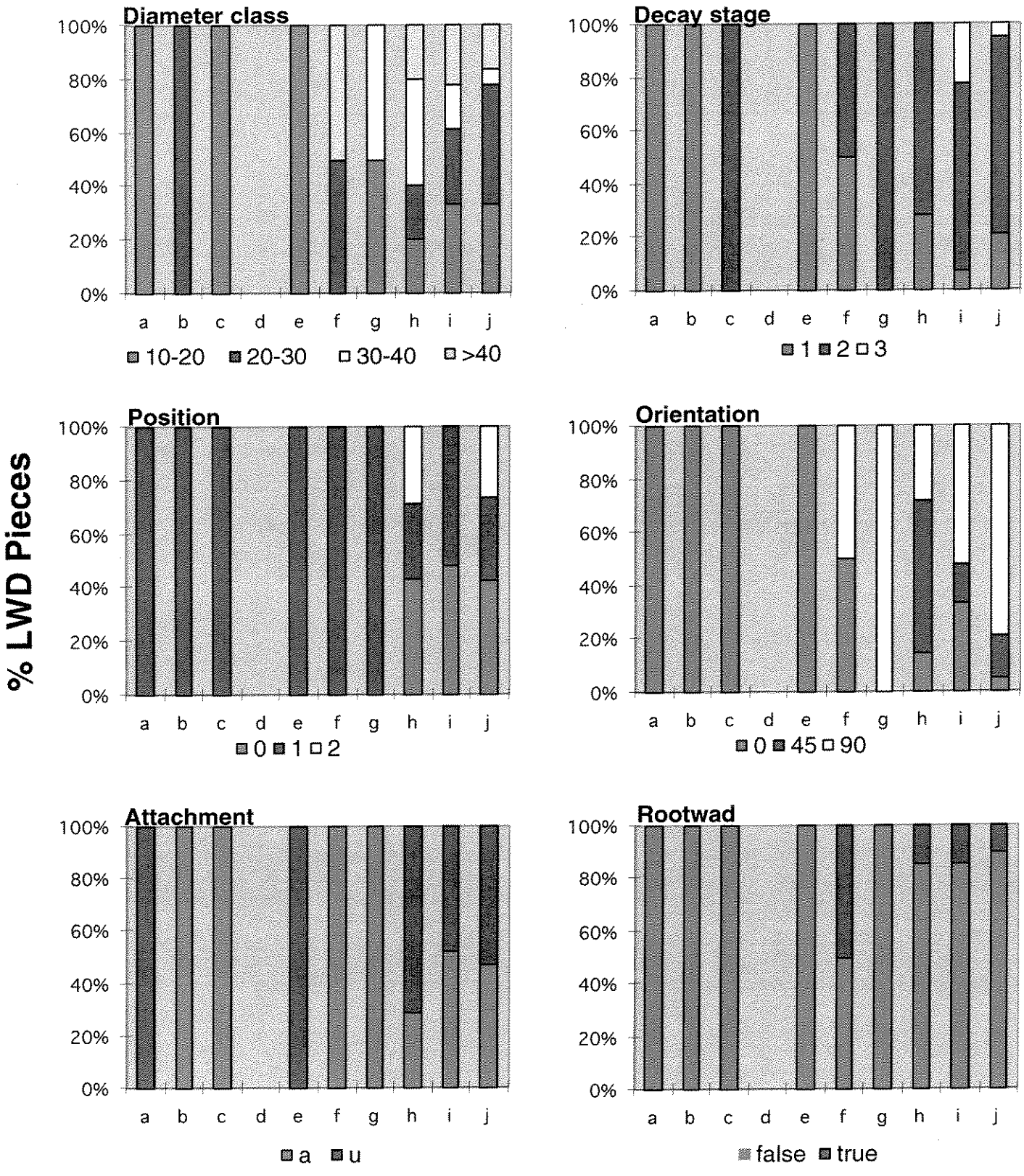



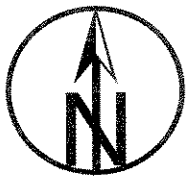



## Goat Creek Reach A



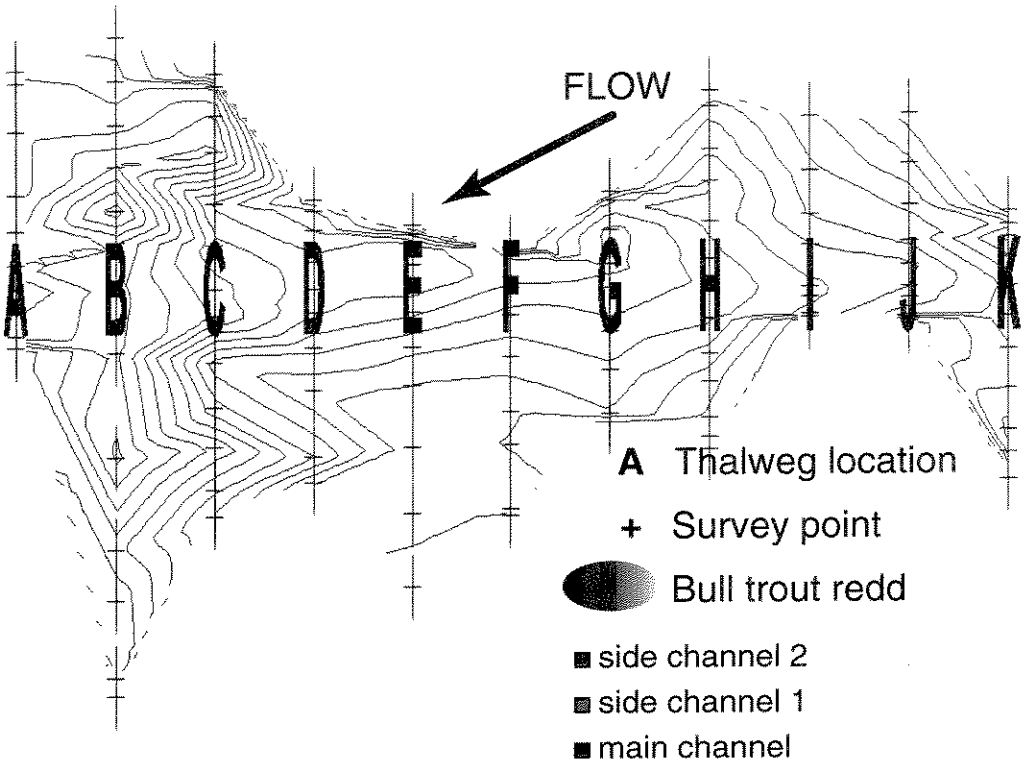



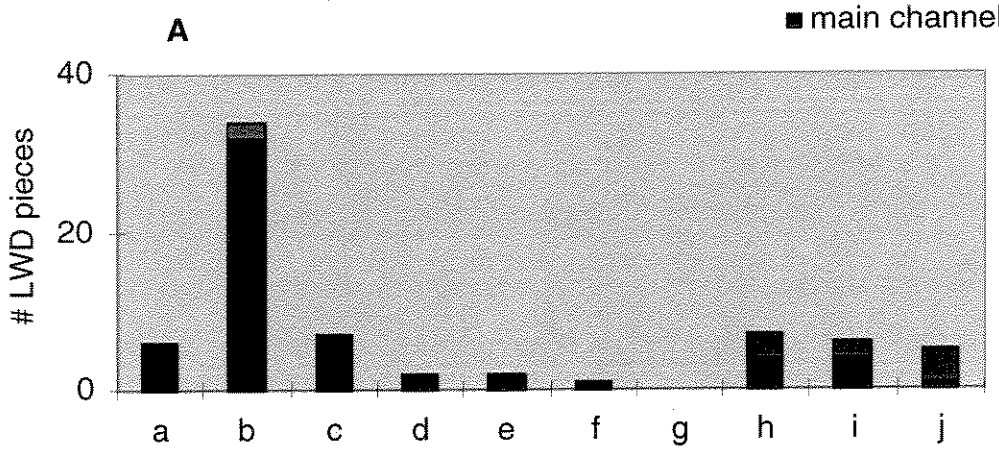

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

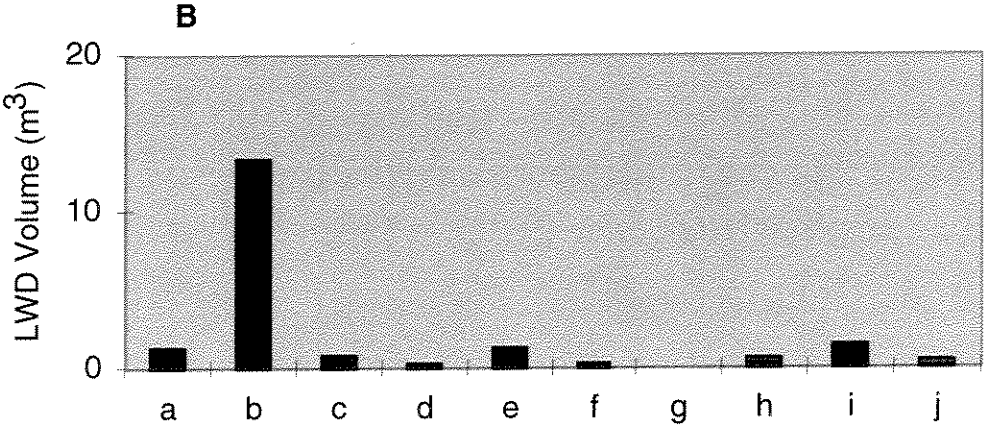


**Goat Creek reach b**

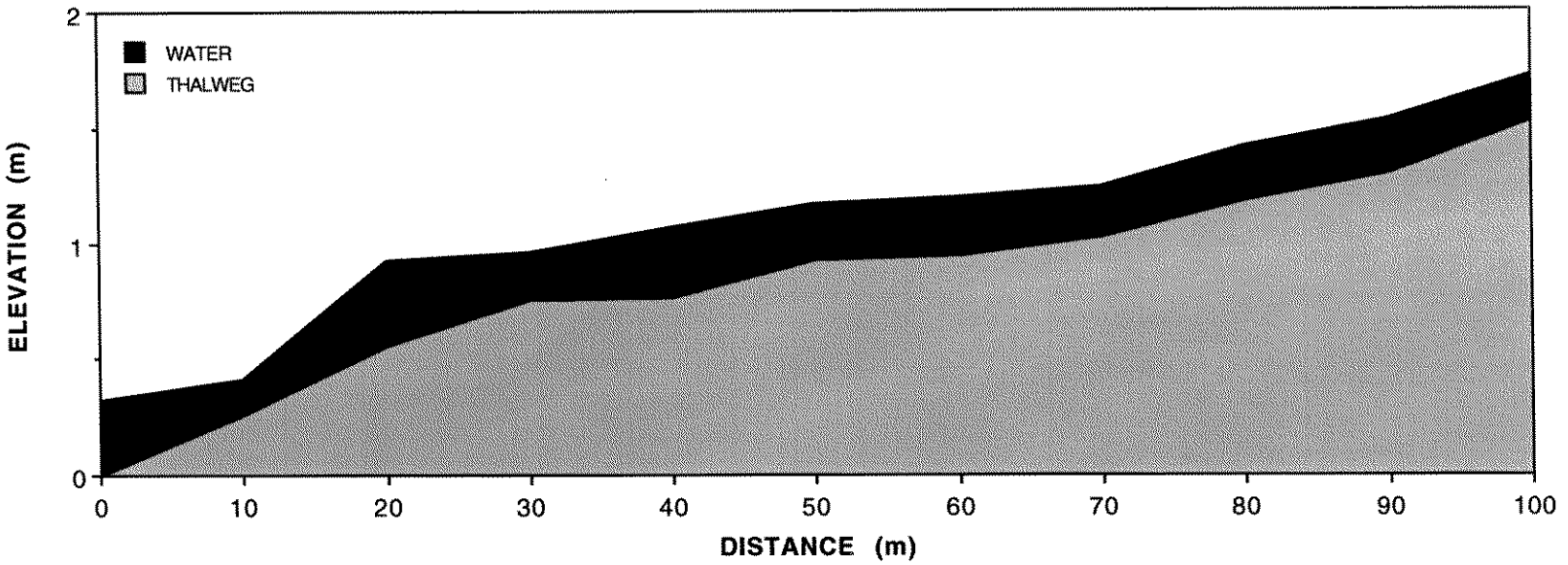
A: Topview of bankfull channel (100 m). contour interval 0.1 m

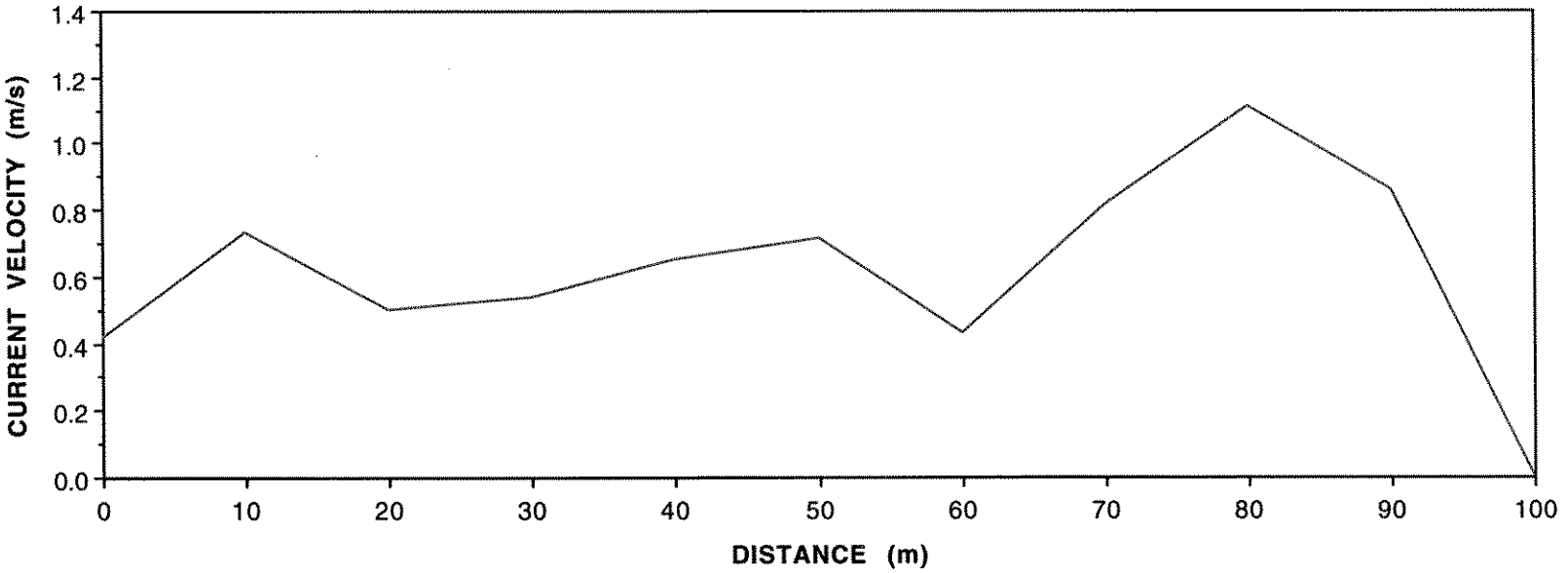


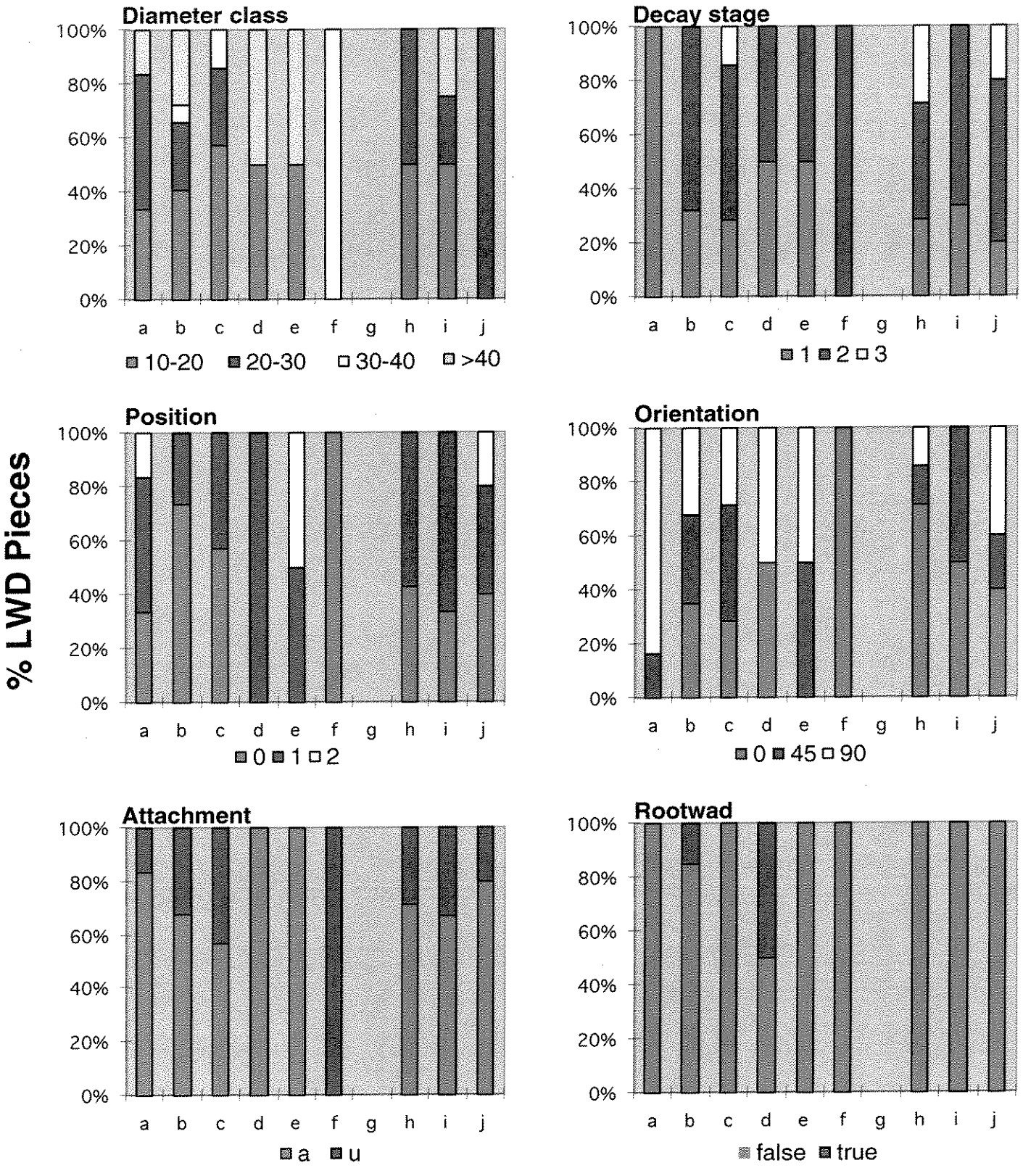



## Goat Creek Reach B

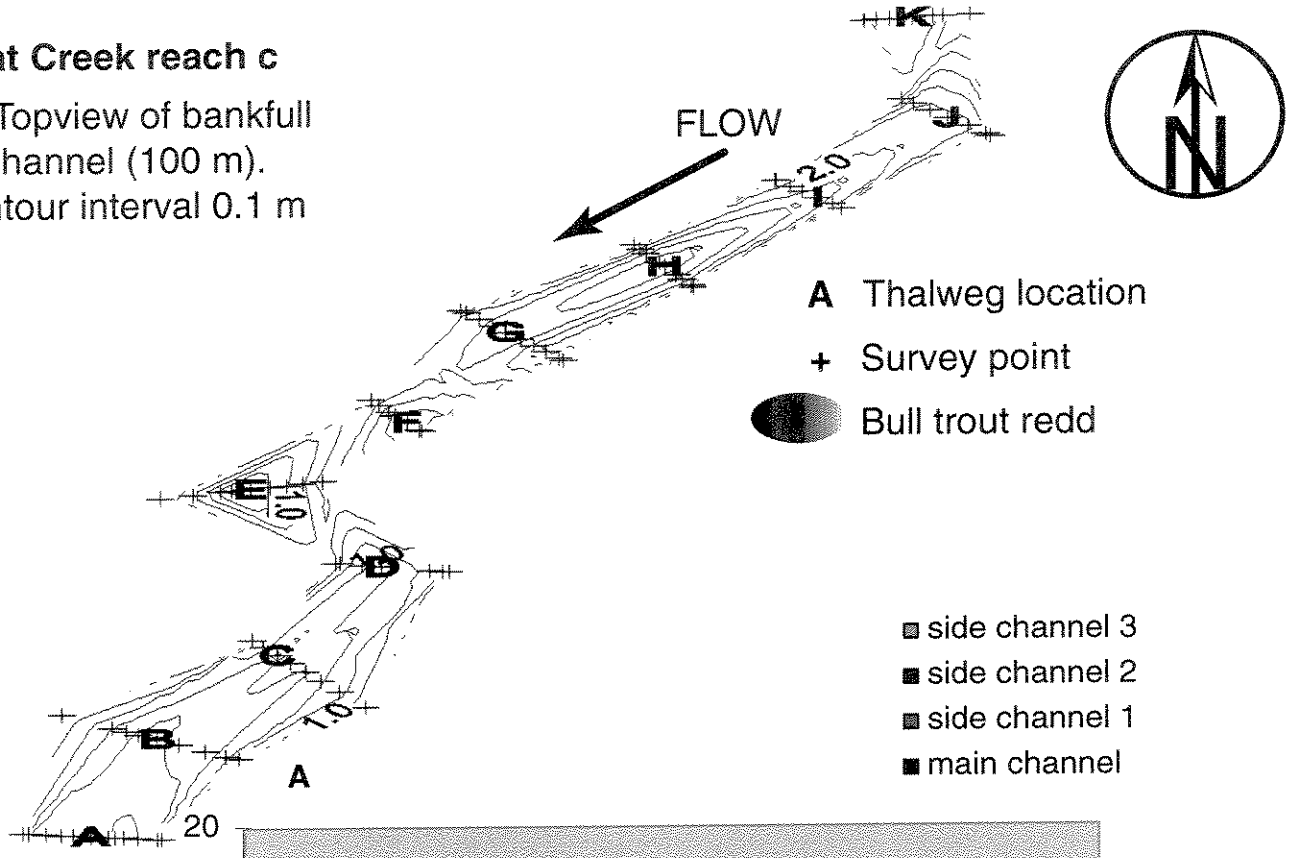


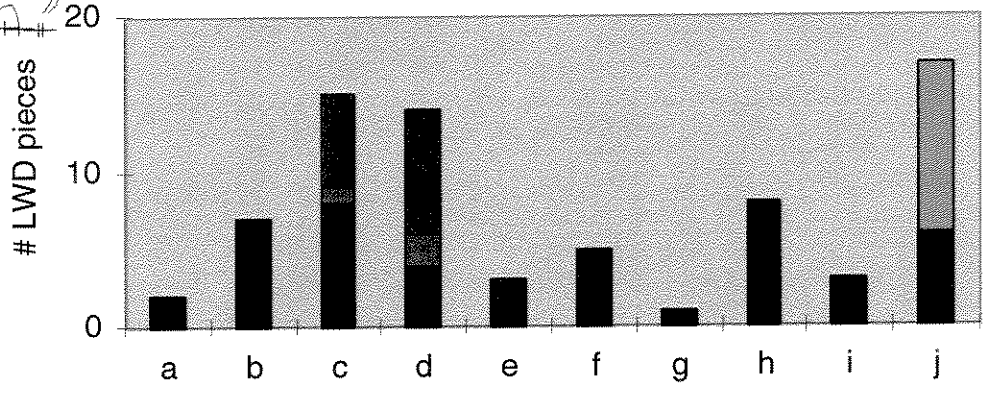

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Goat Creek reach c**

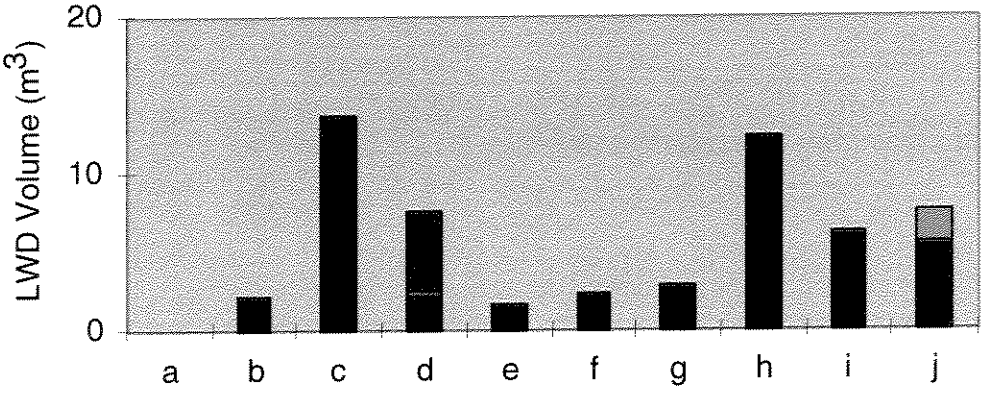
A: Topview of bankfull channel (100 m). contour interval 0.1 m



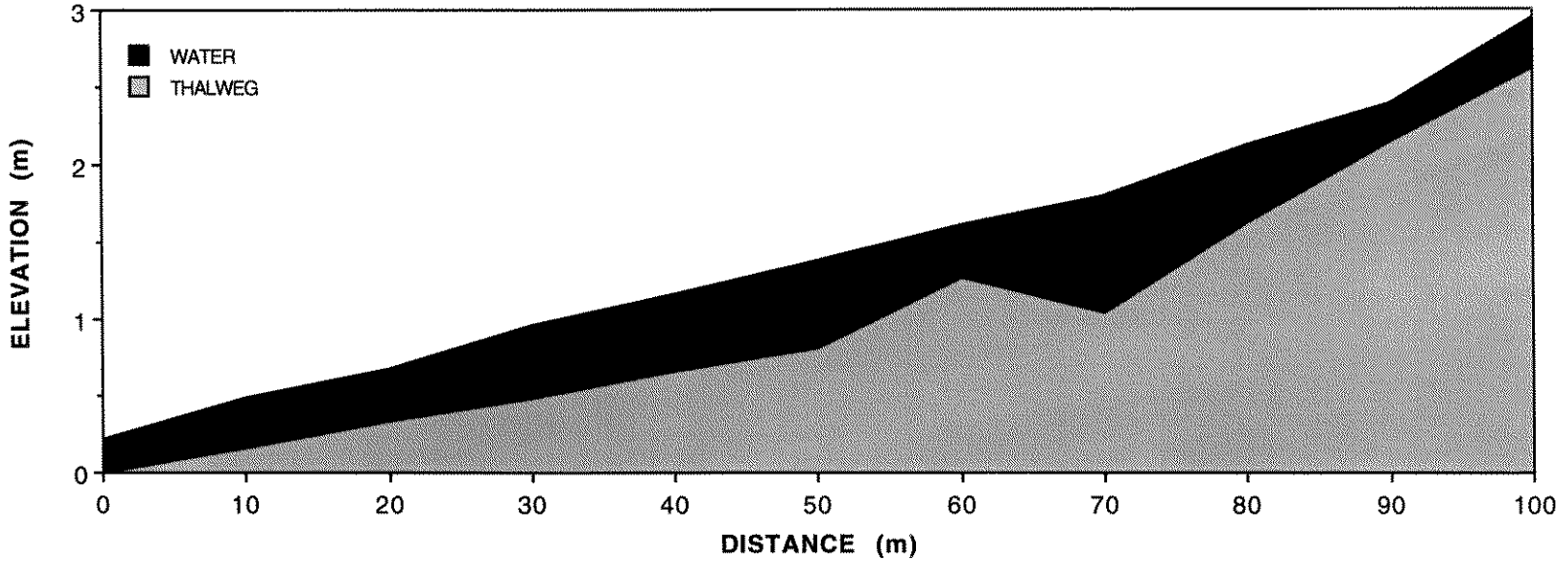

A

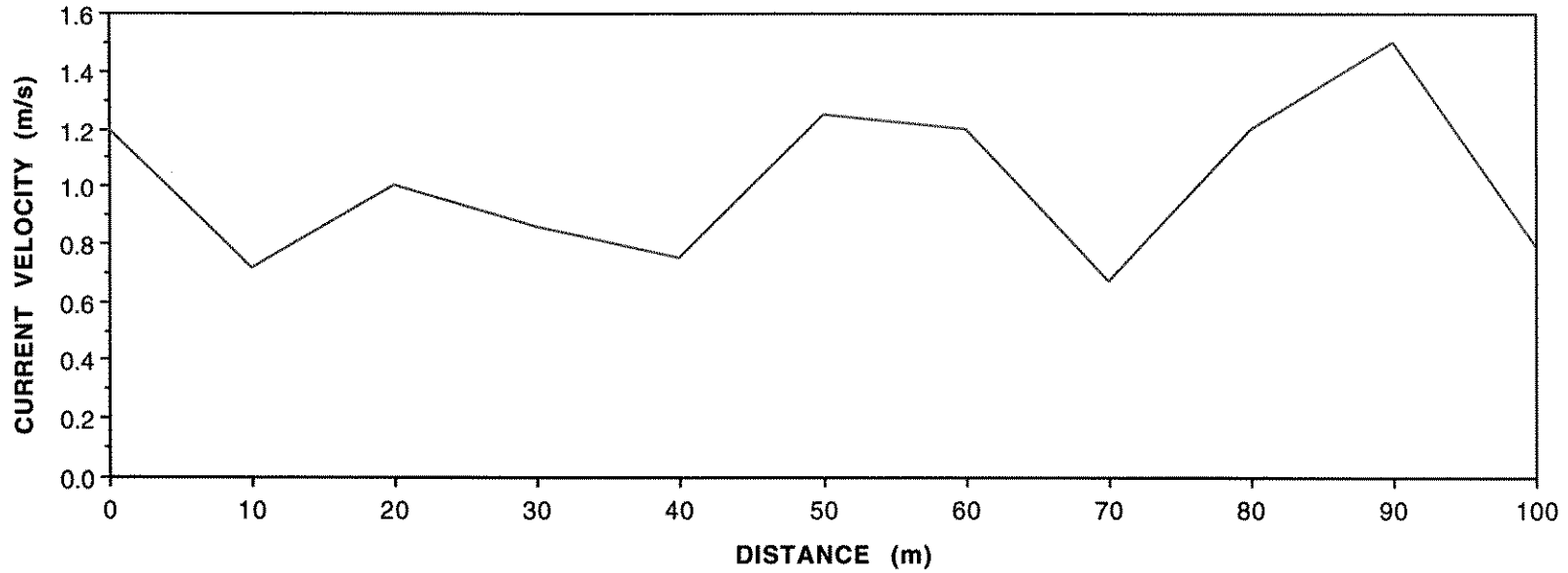


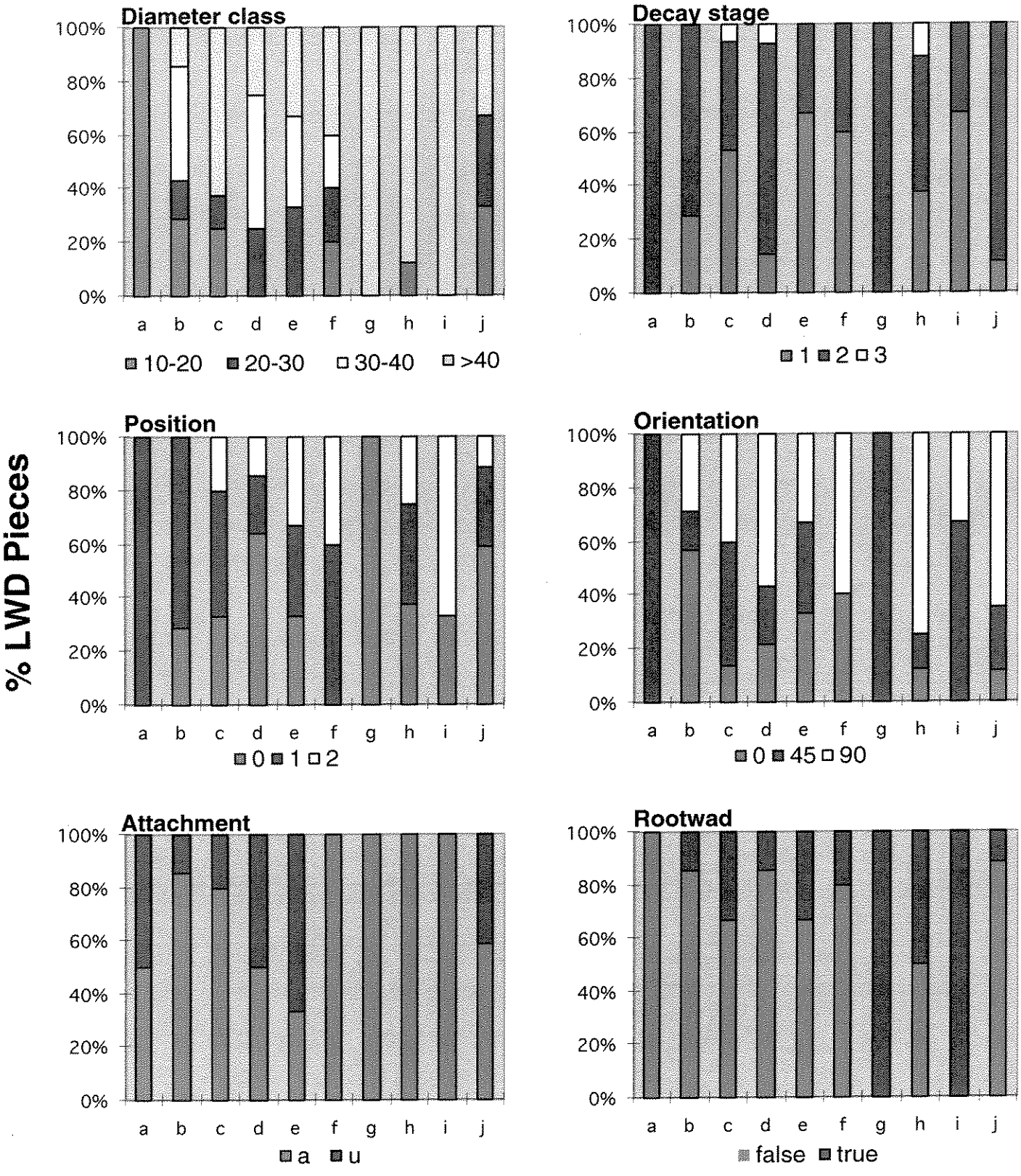

B



## Goat Creek Reach C

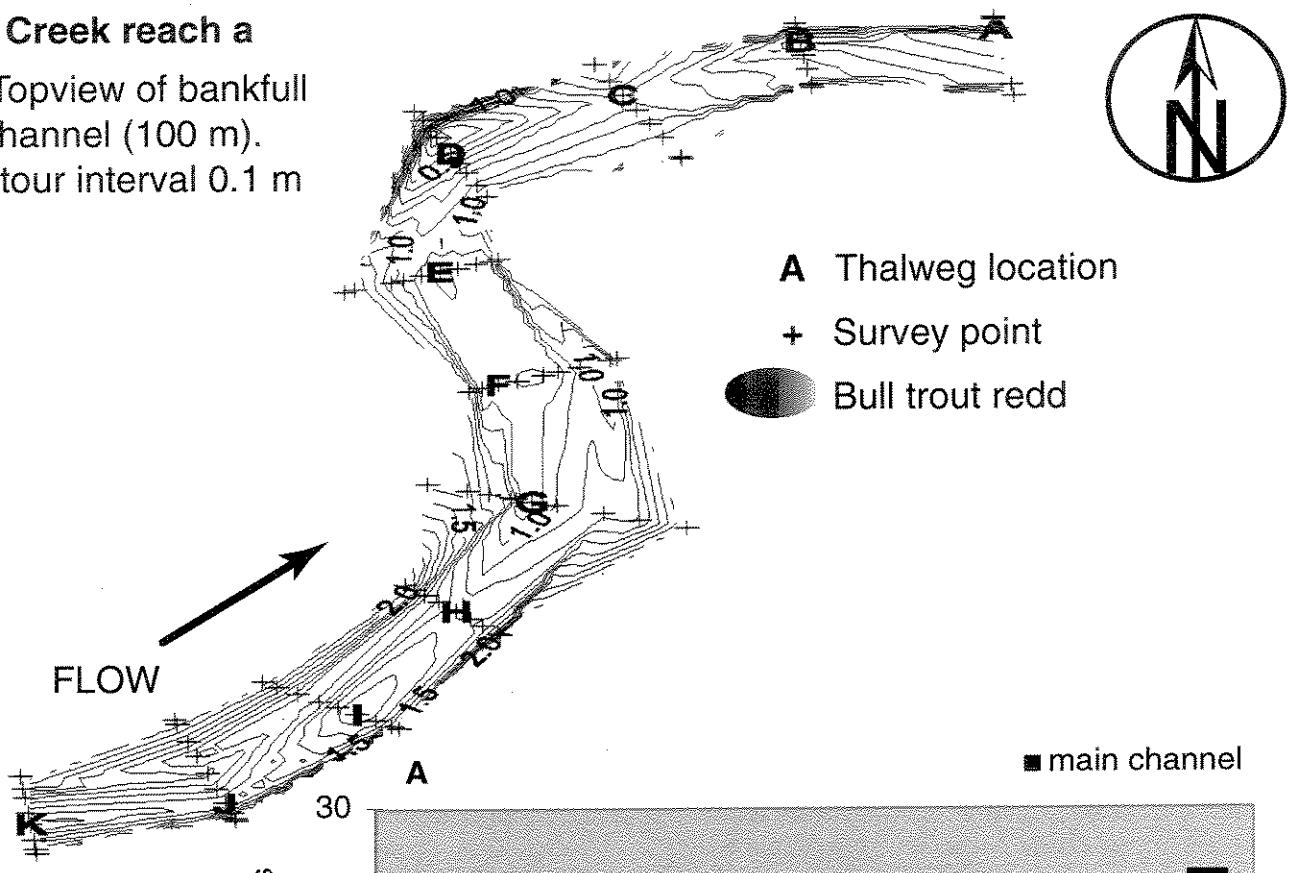


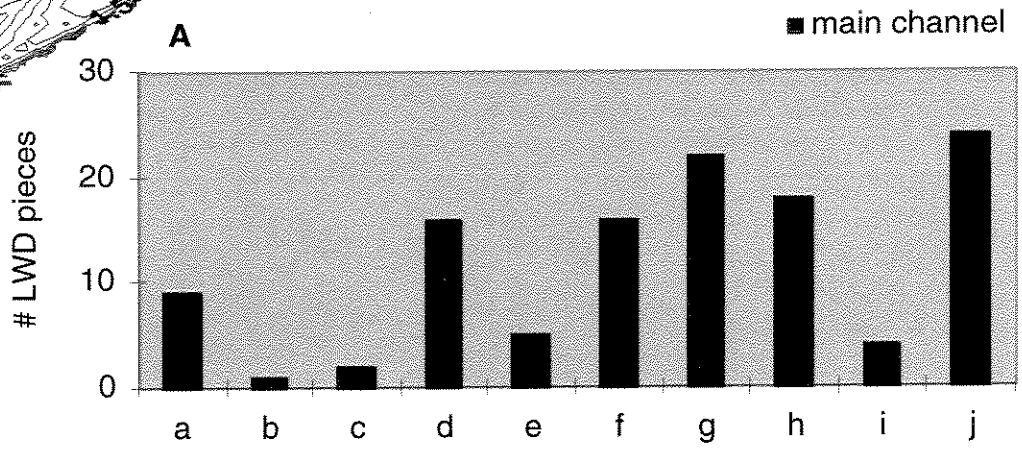



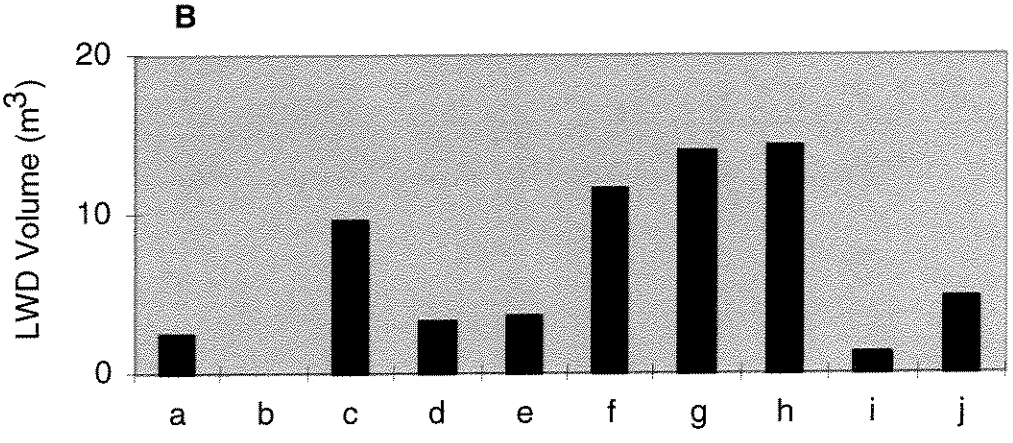

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Jim Creek reach a**

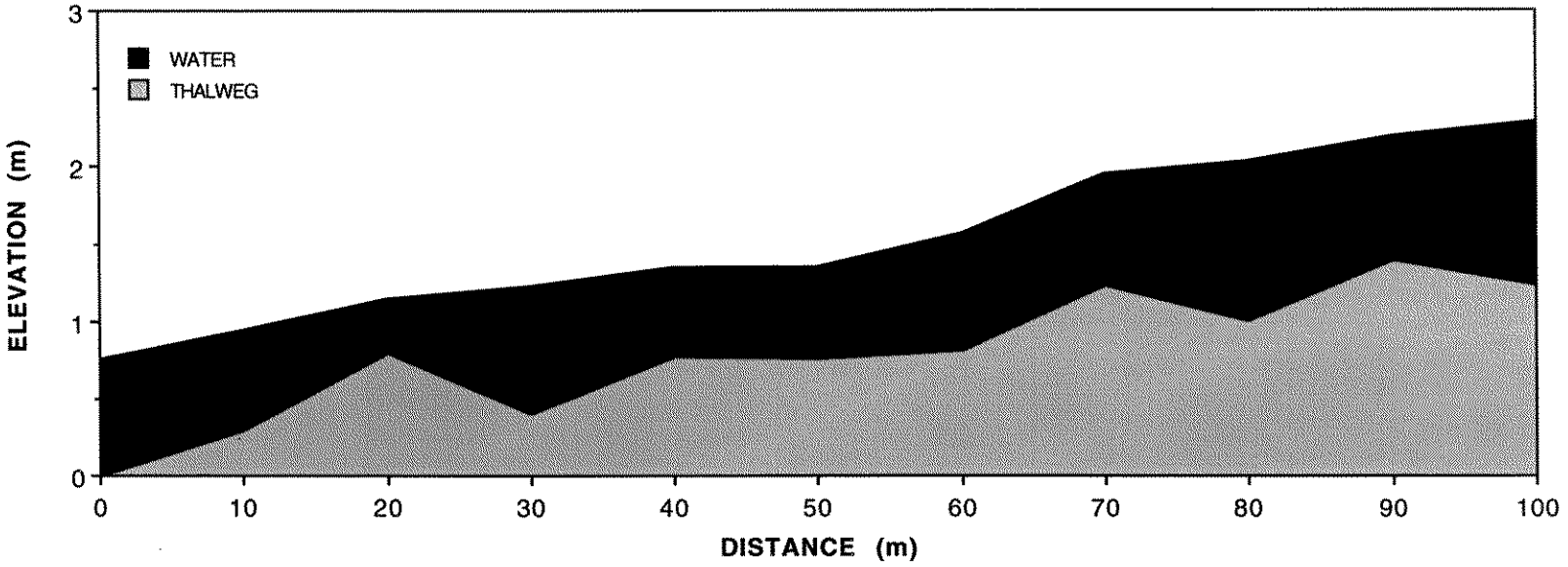
A: Topview of bankfull channel (100 m). contour interval 0.1 m

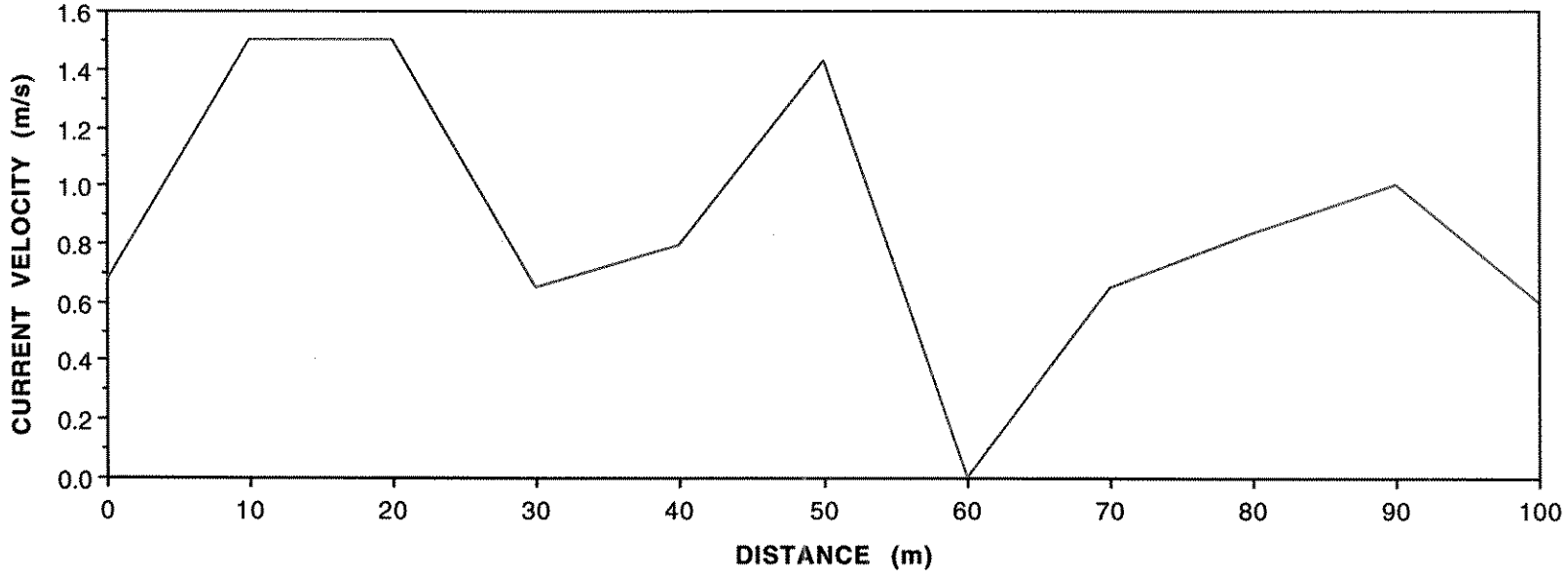


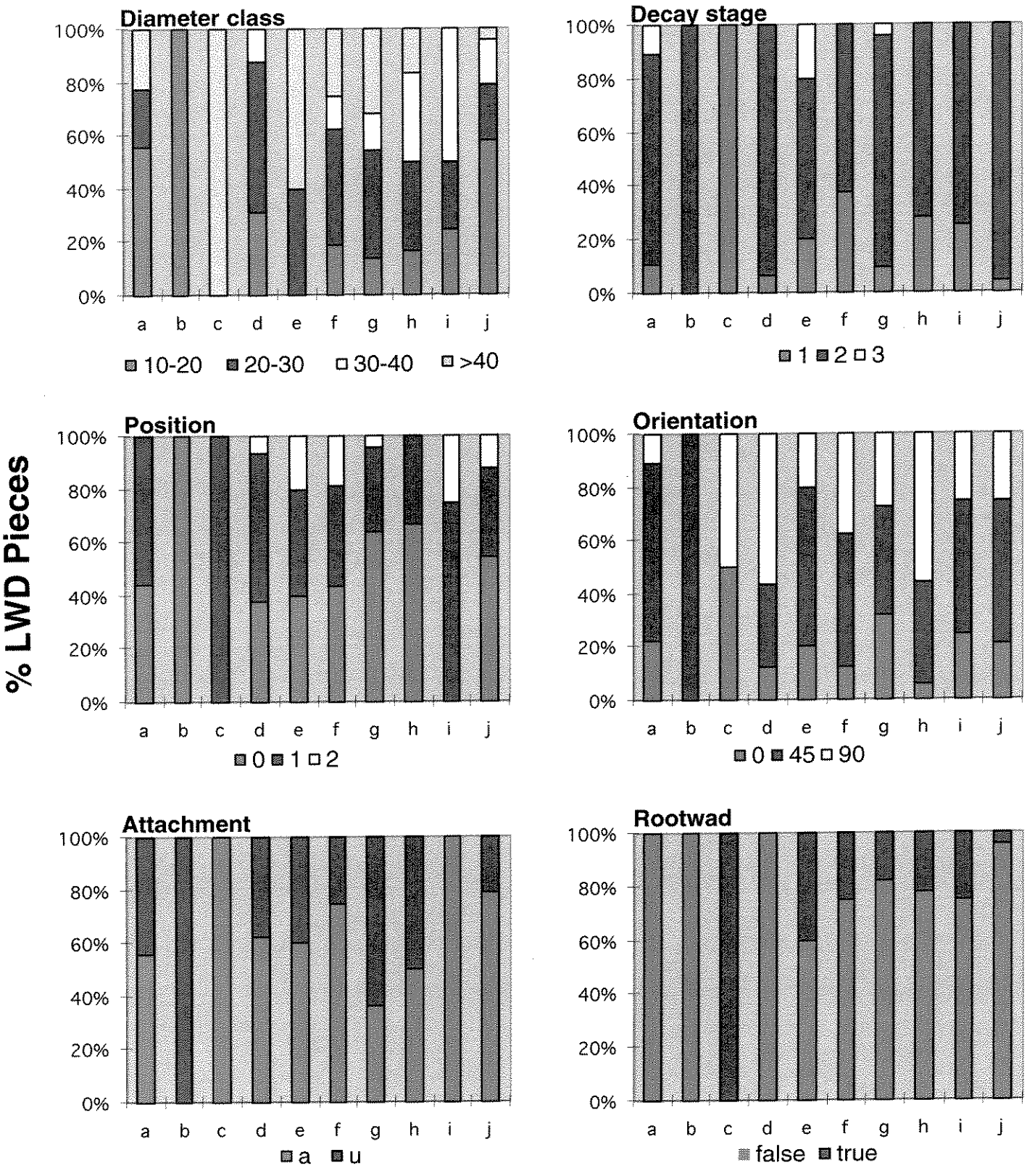



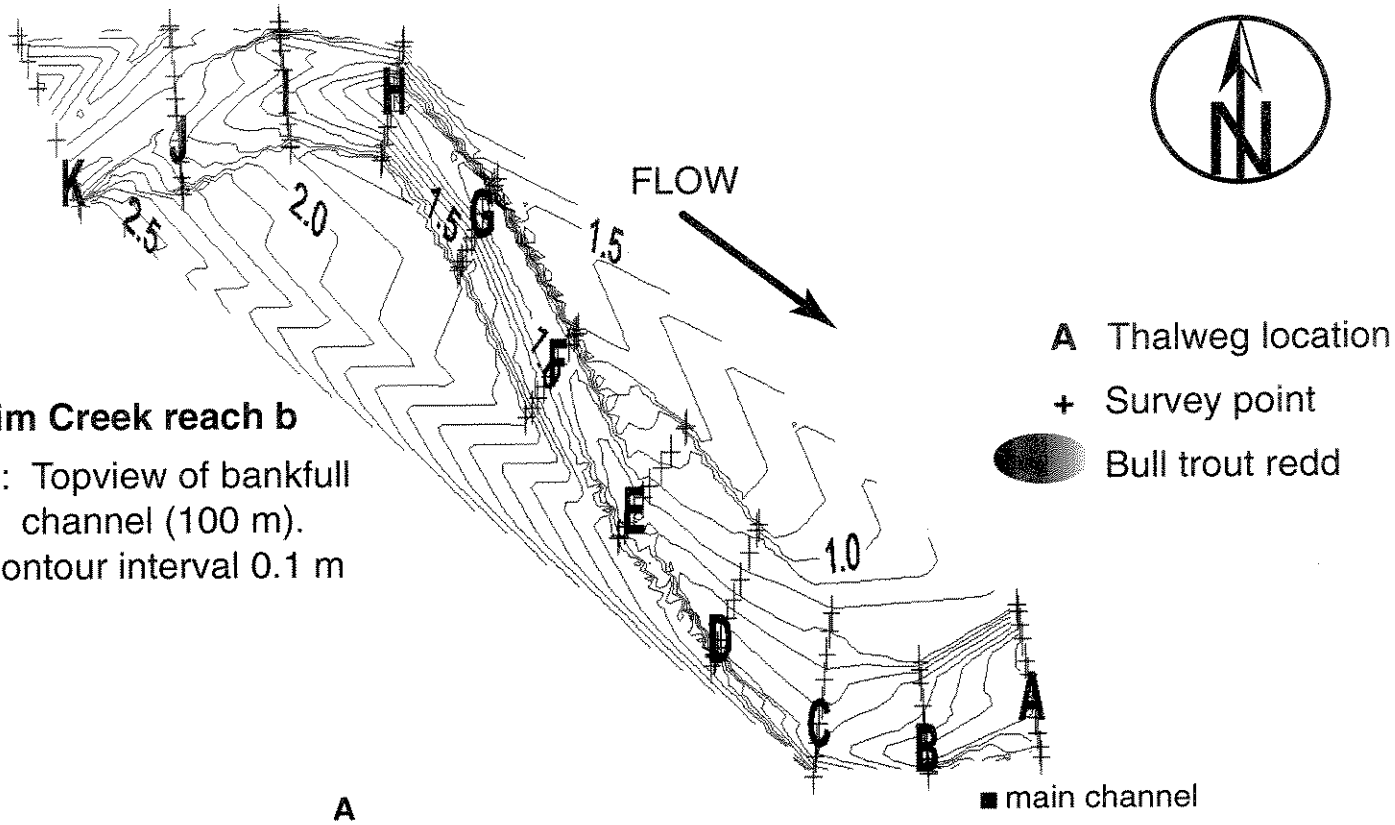



## Jim Creek Reach A



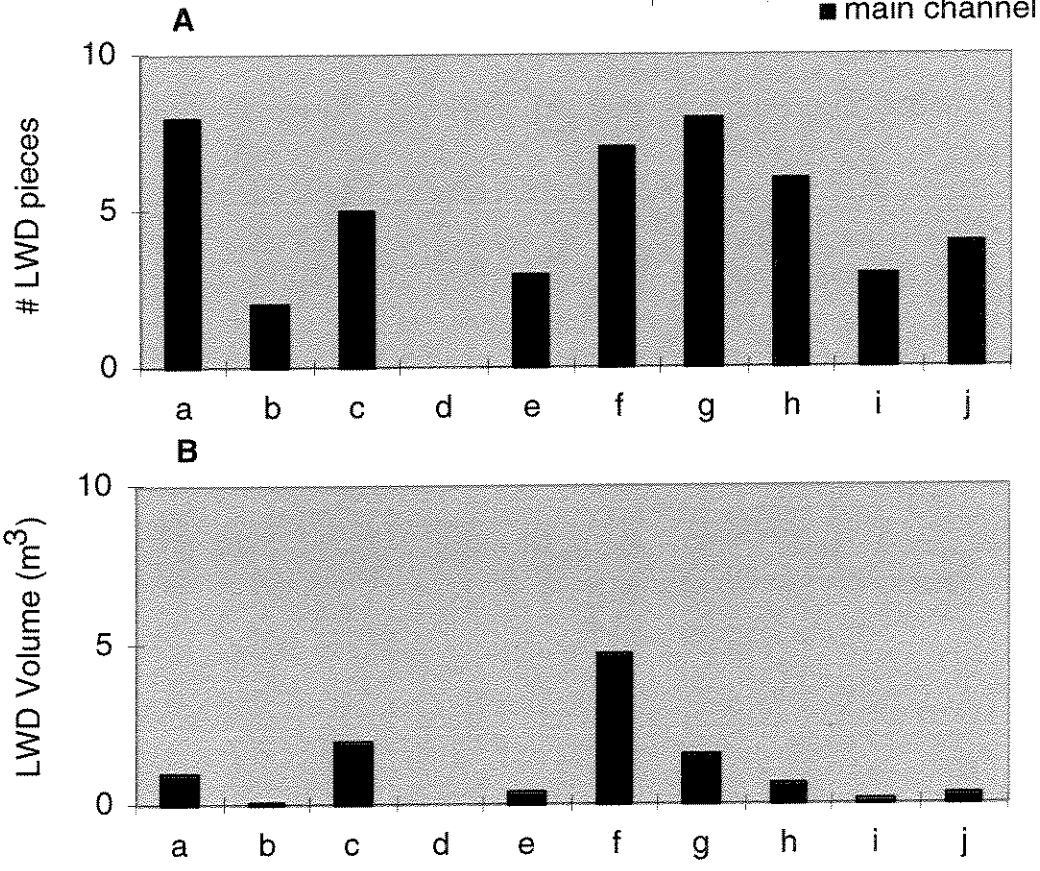




% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

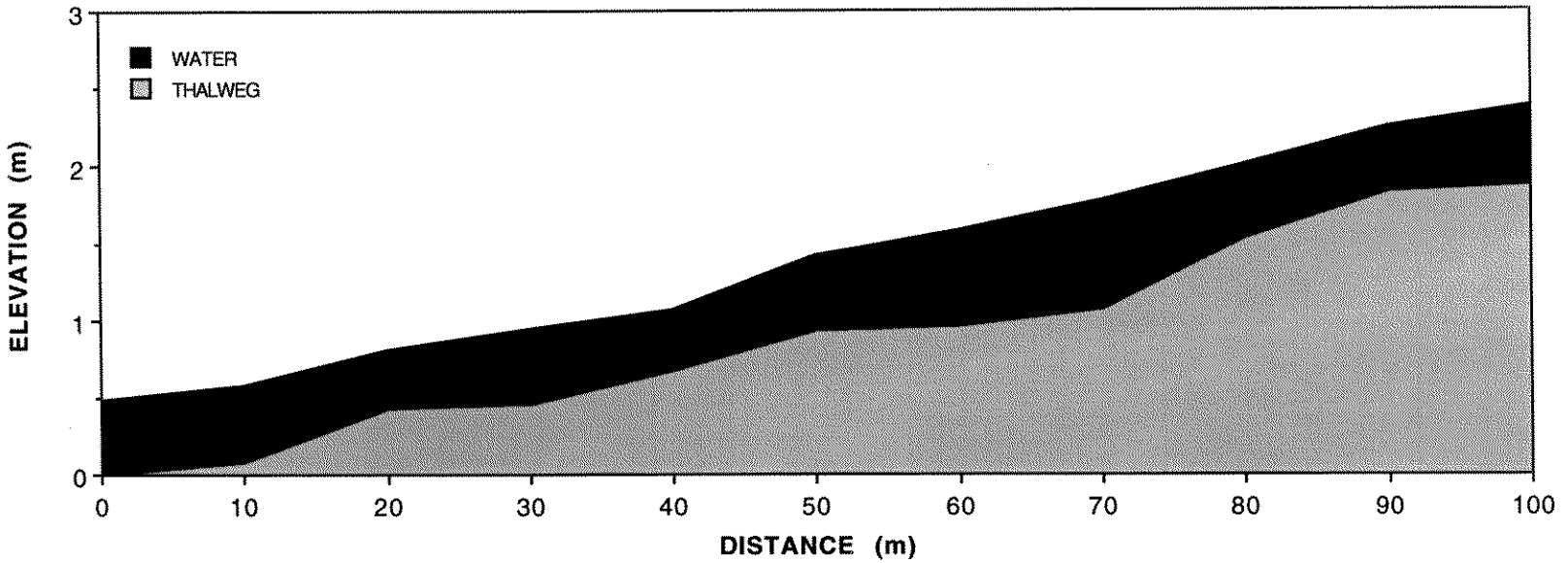


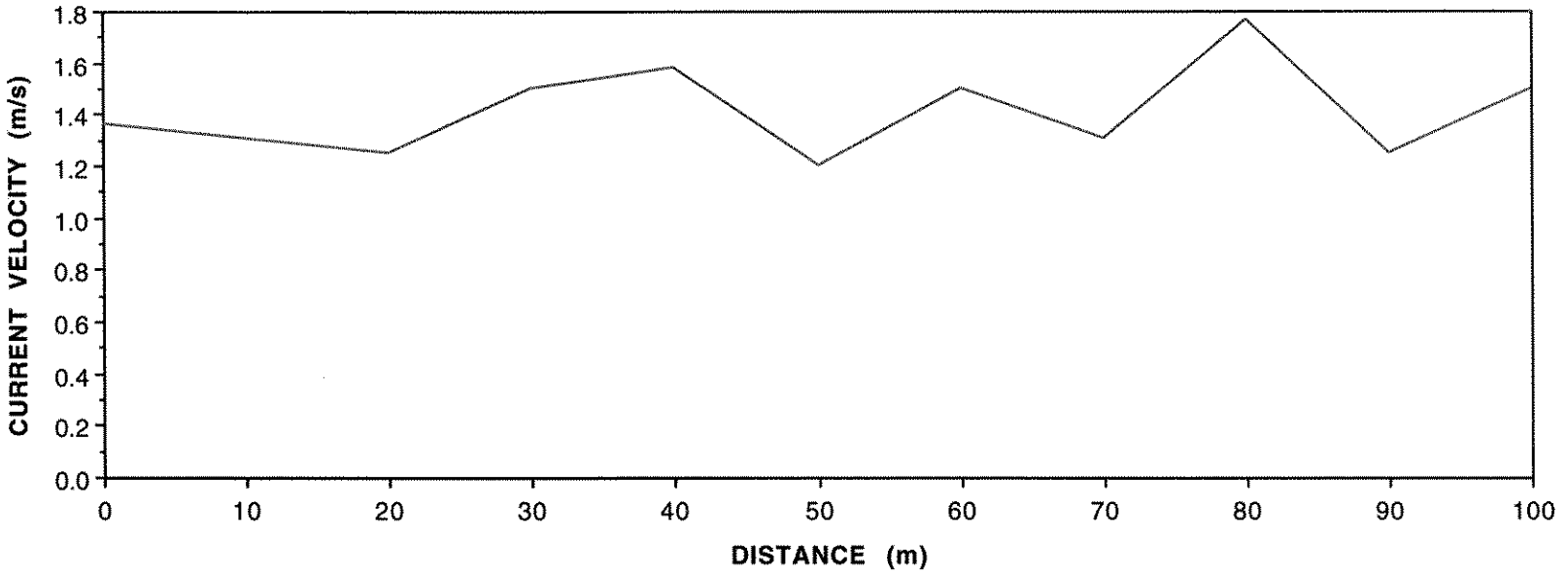

**Jim Creek reach b**

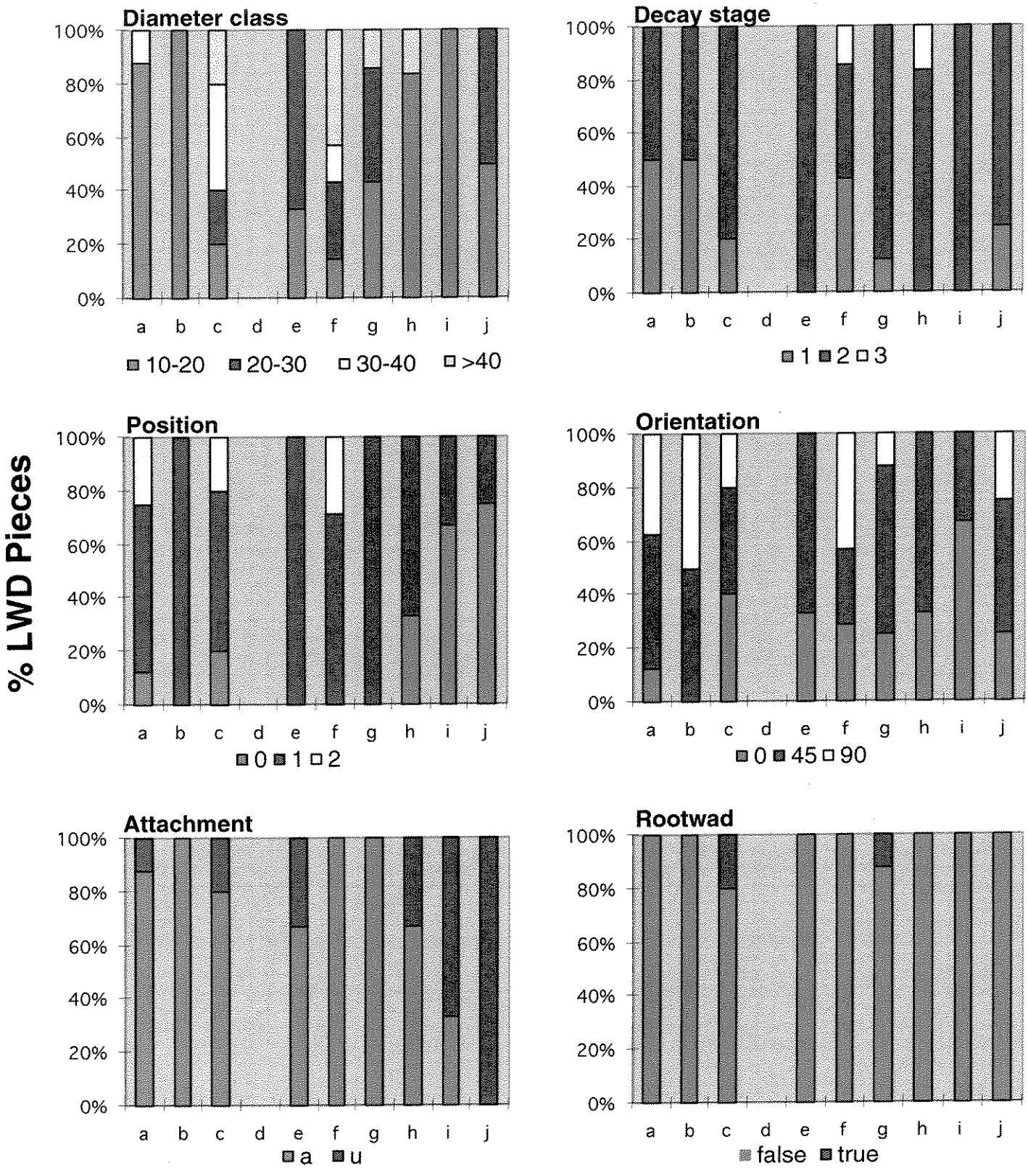
A: Topview of bankfull channel (100 m). contour interval 0.1 m



## Jim Creek Reach B

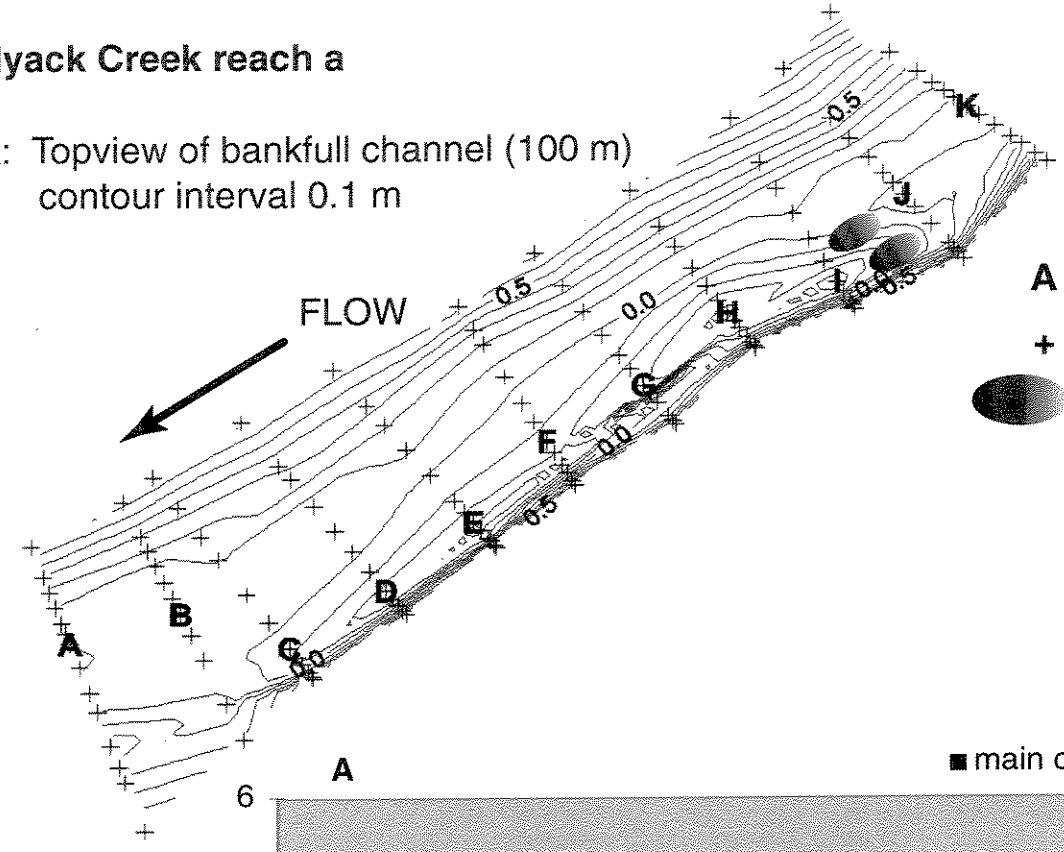



% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Nyack Creek reach a**

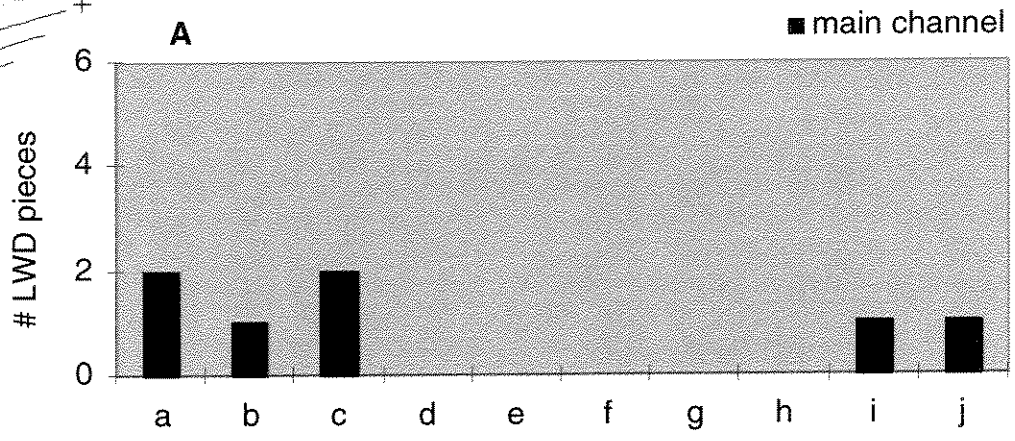
A: Topview of bankfull channel (100 m)
contour interval 0.1 m

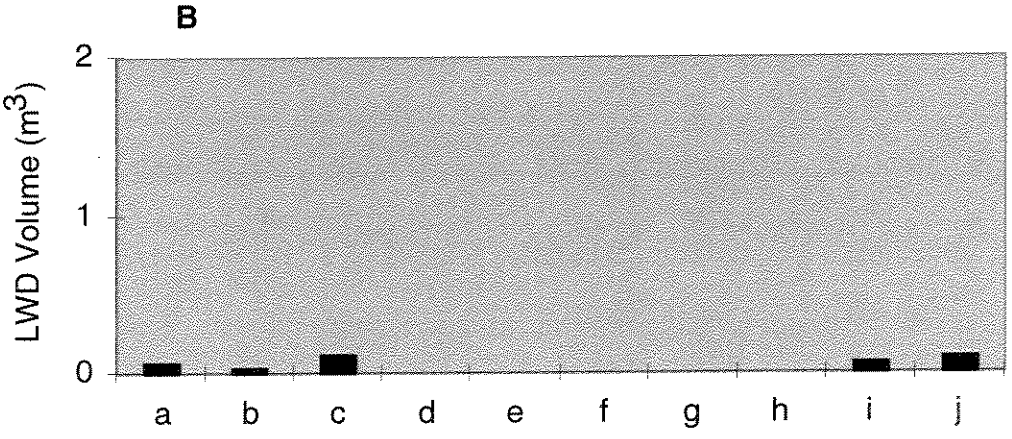



A Thalweg location

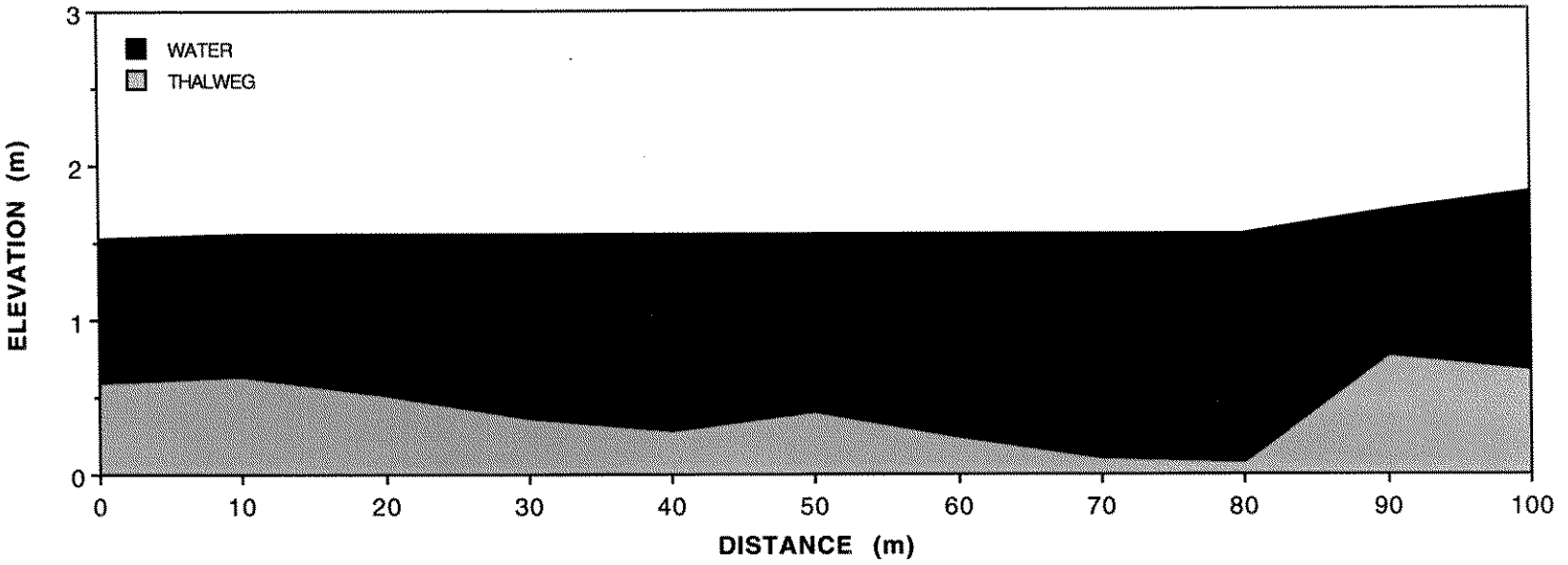
\+ Survey point

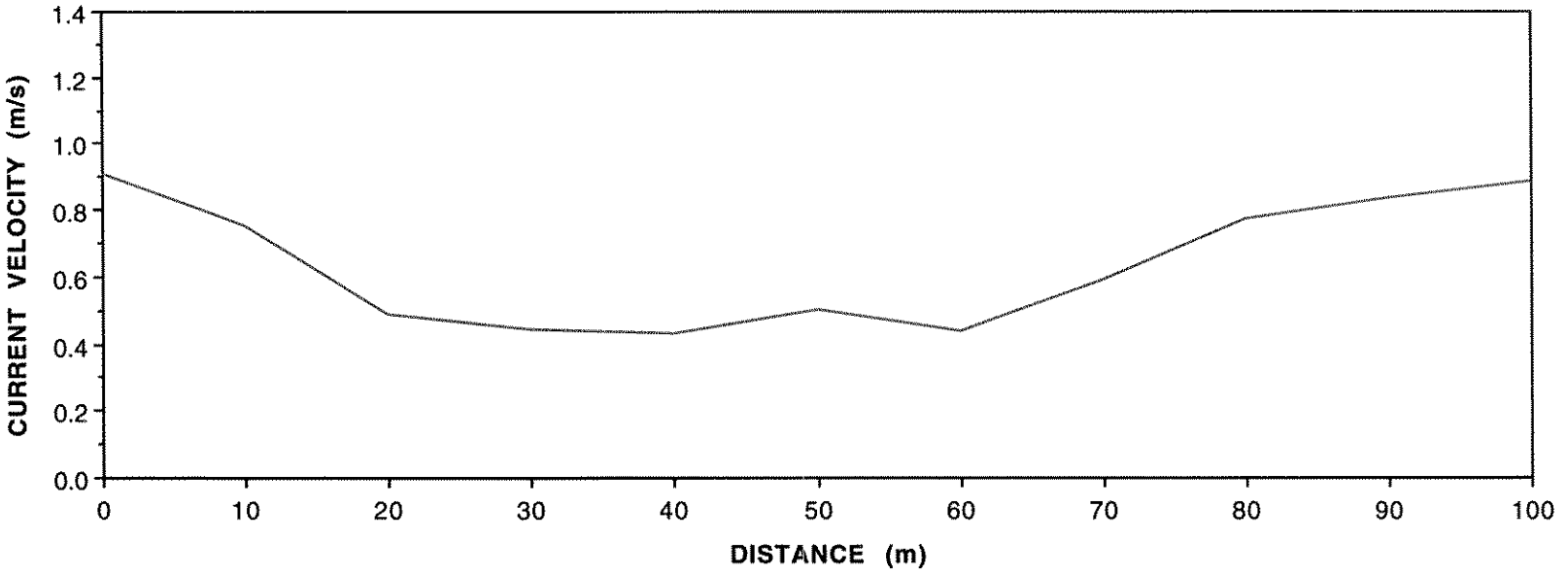
Bull trout redd

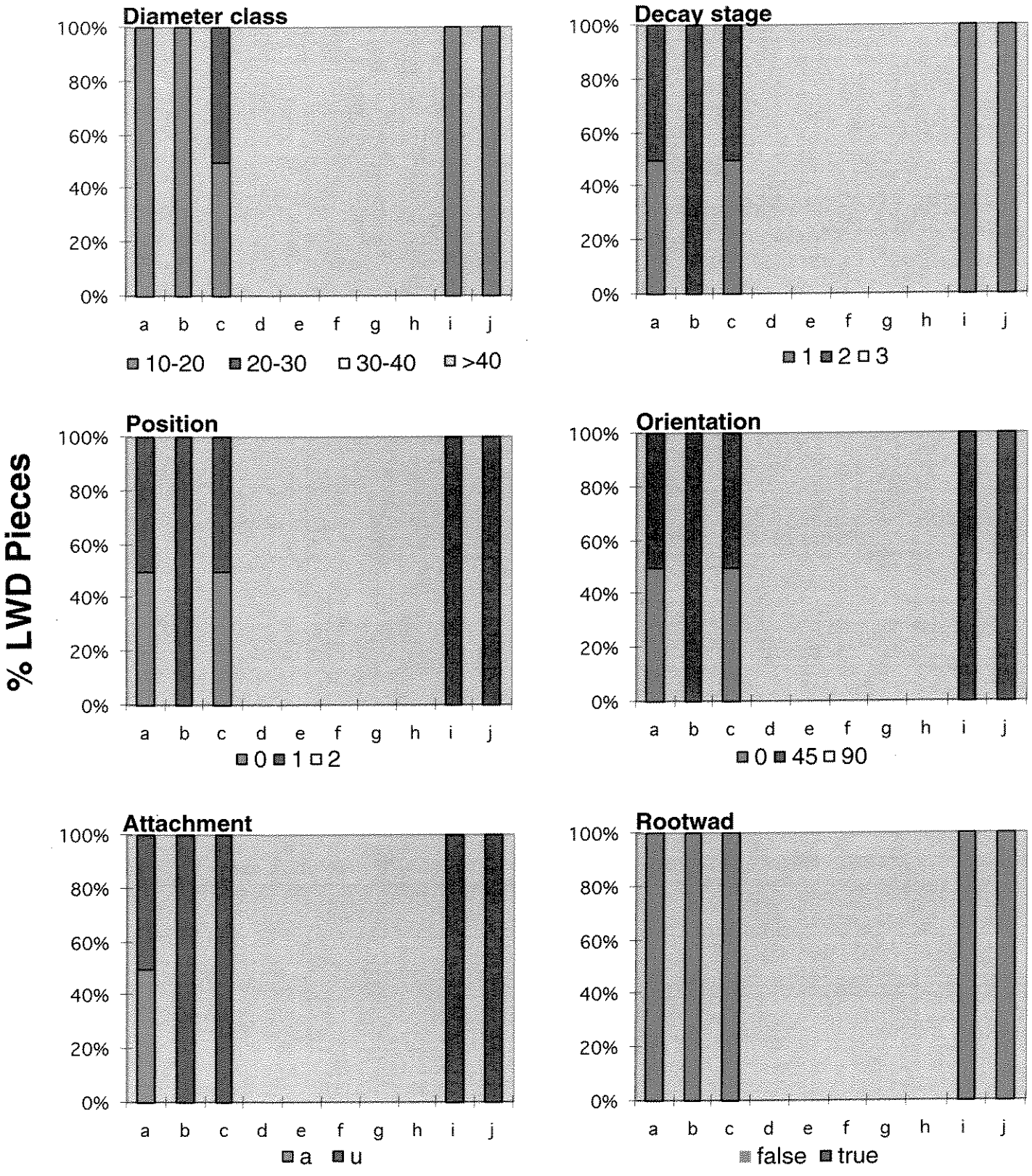


## Nyack Creek Reach A

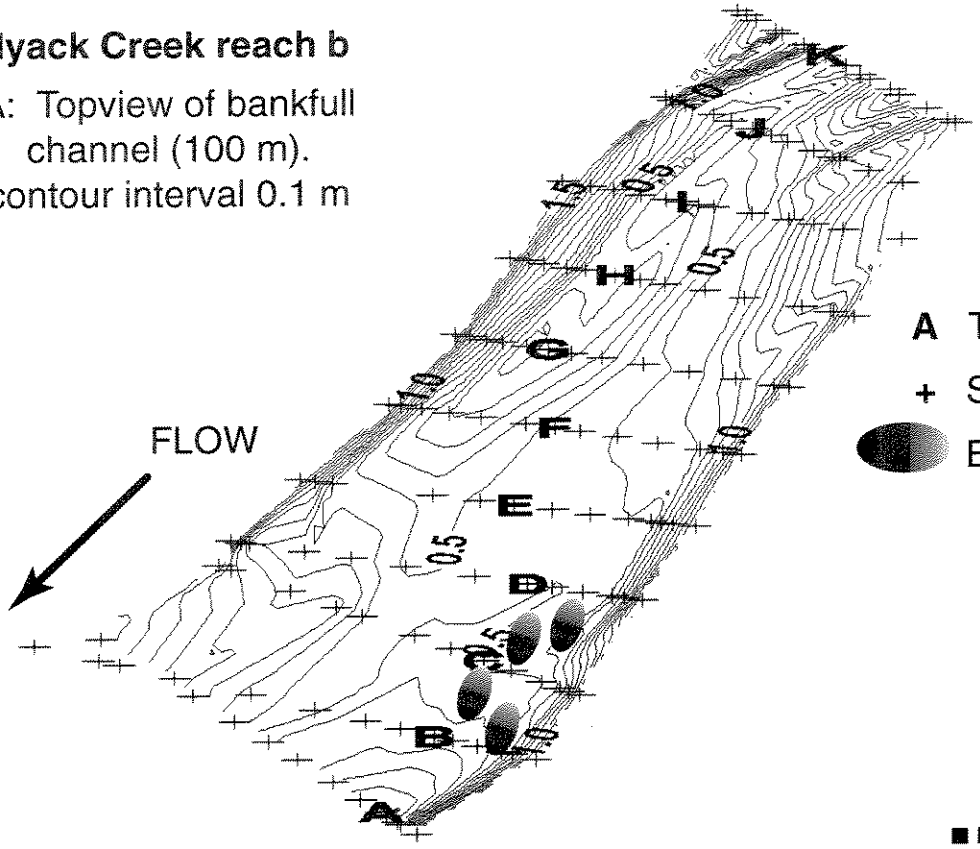


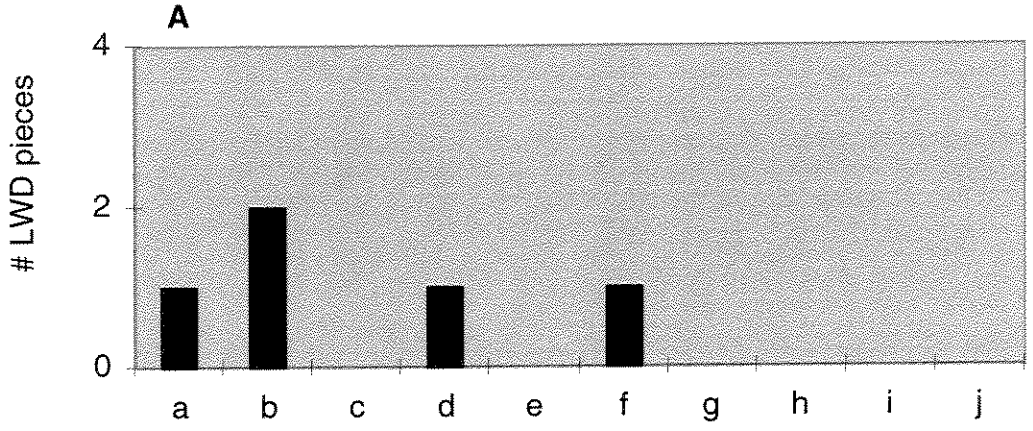



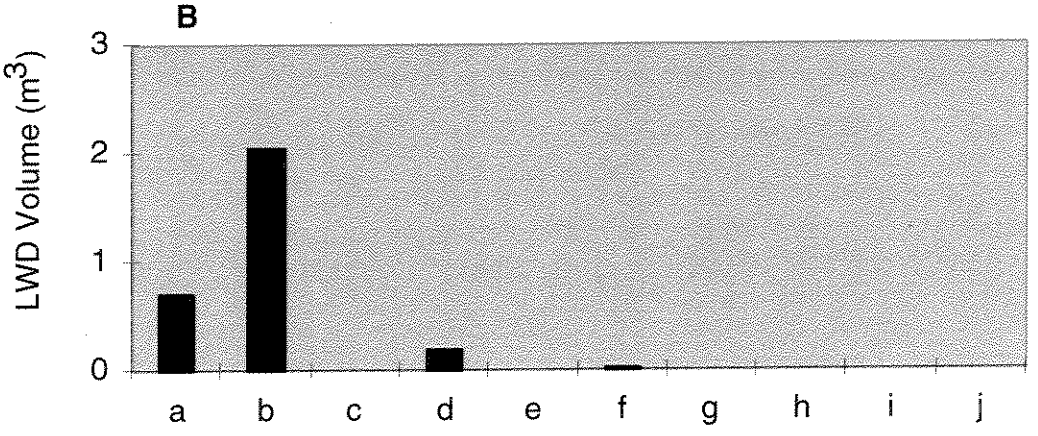

Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
% LWD Pieces
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Nyack Creek reach b**

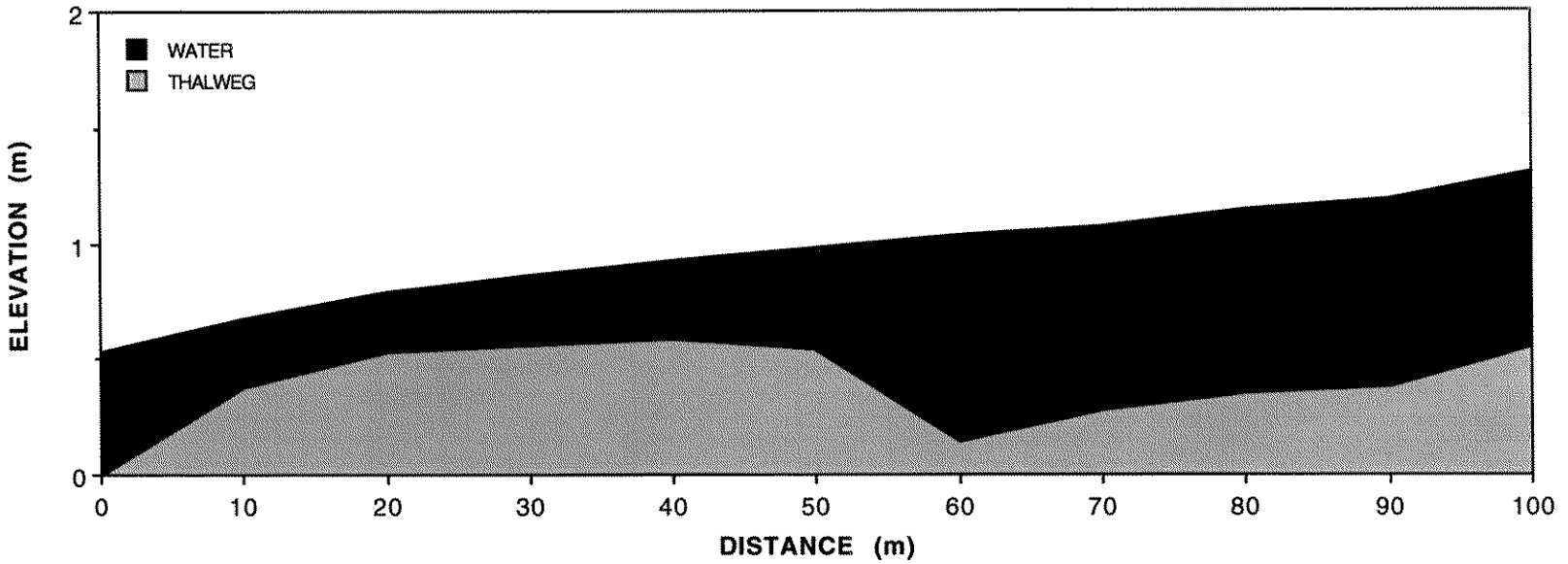
A: Topview of bankfull channel (100 m). contour interval 0.1 m

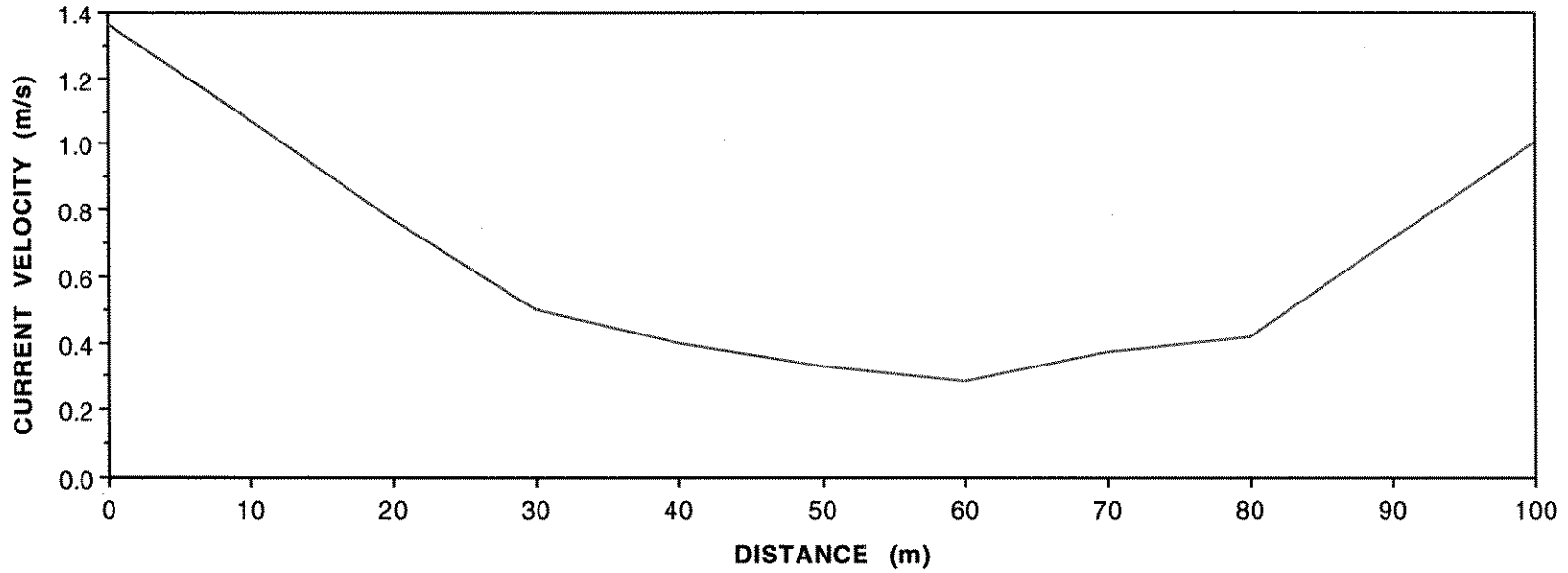


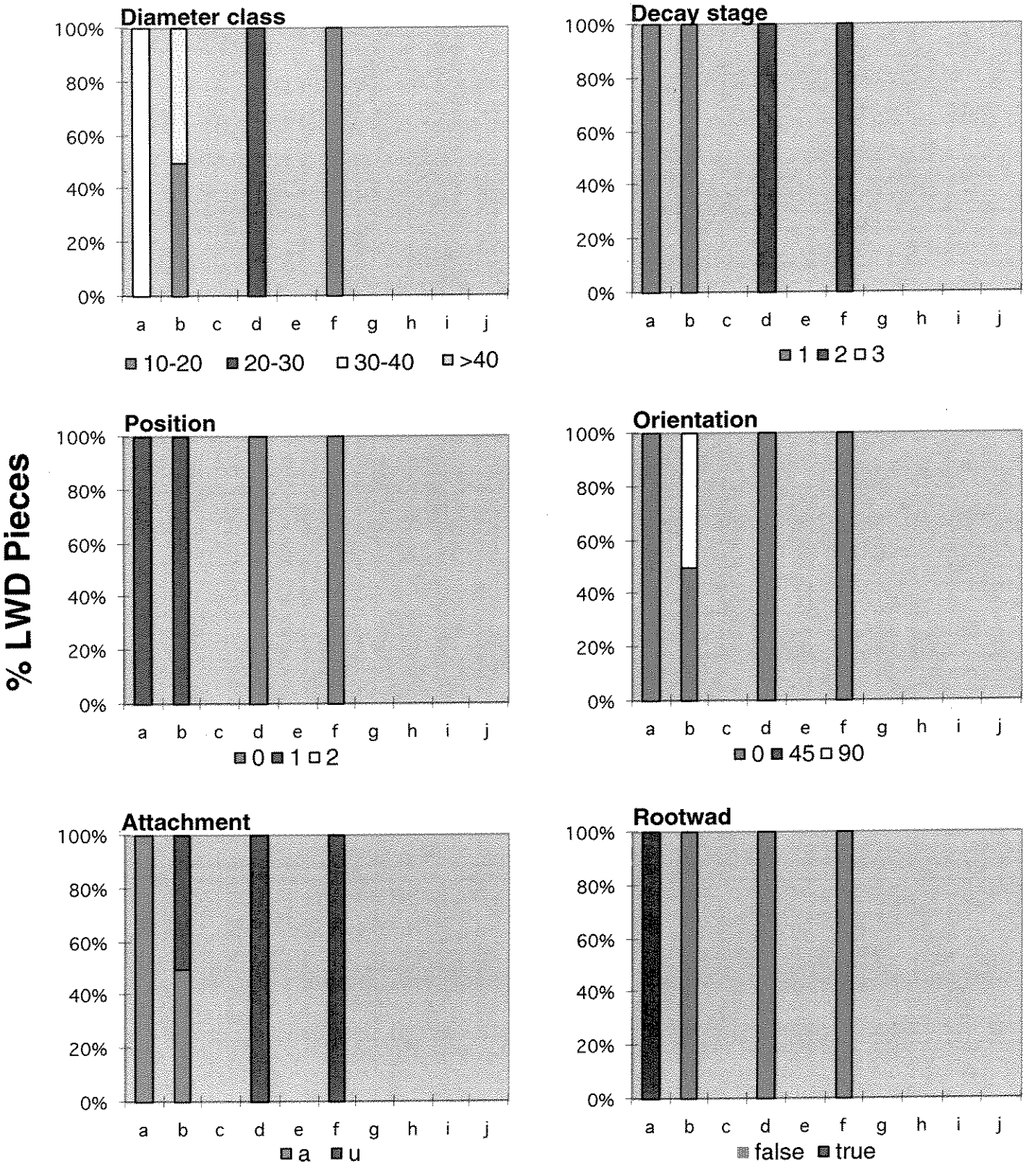



## Nyack Creek Reach B

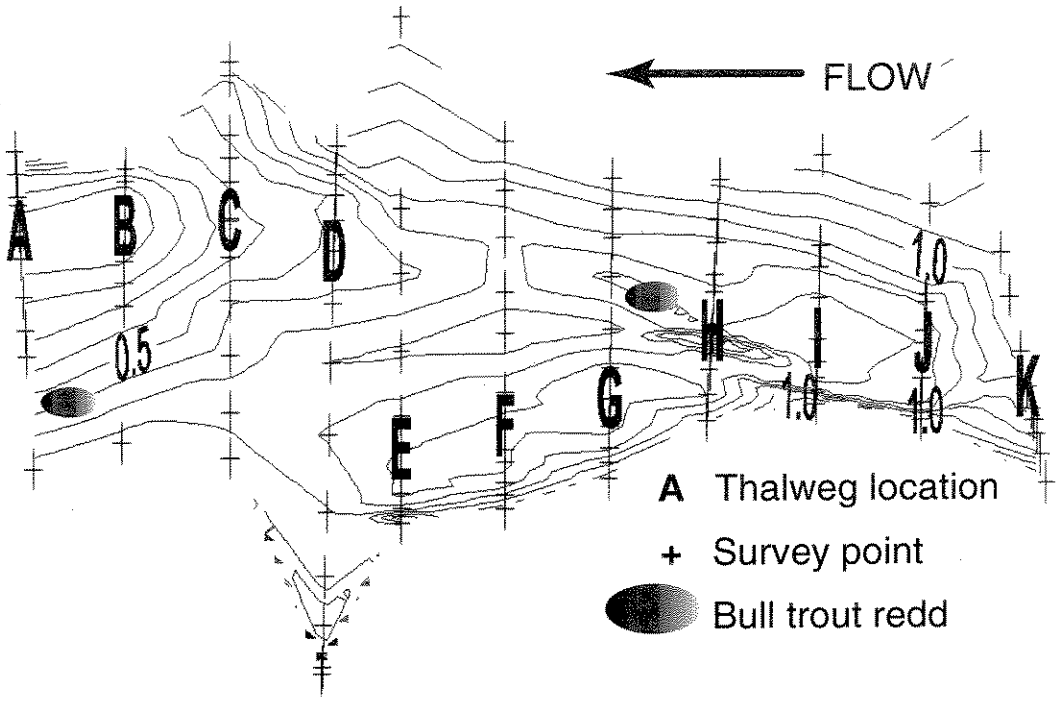


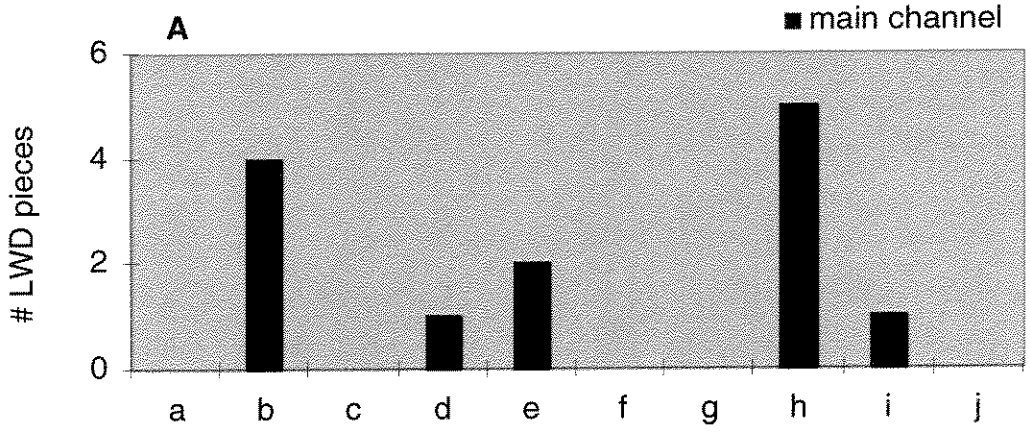



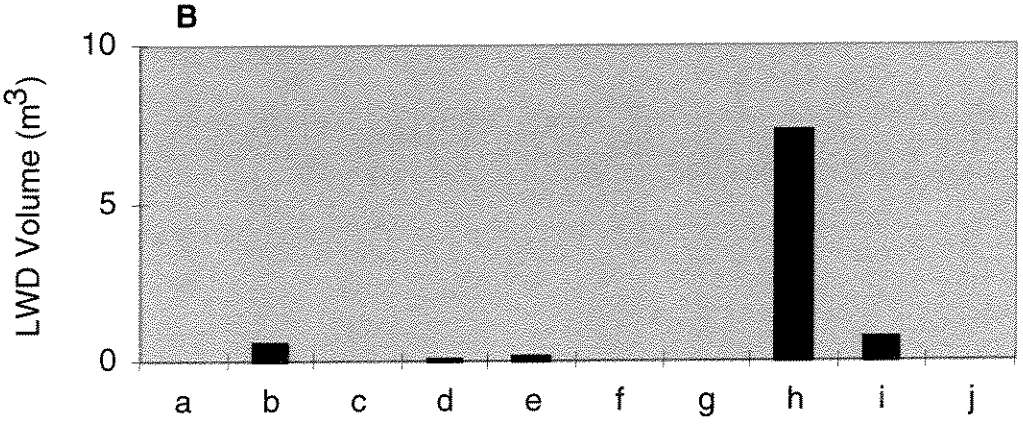

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Ole Creek reach a**

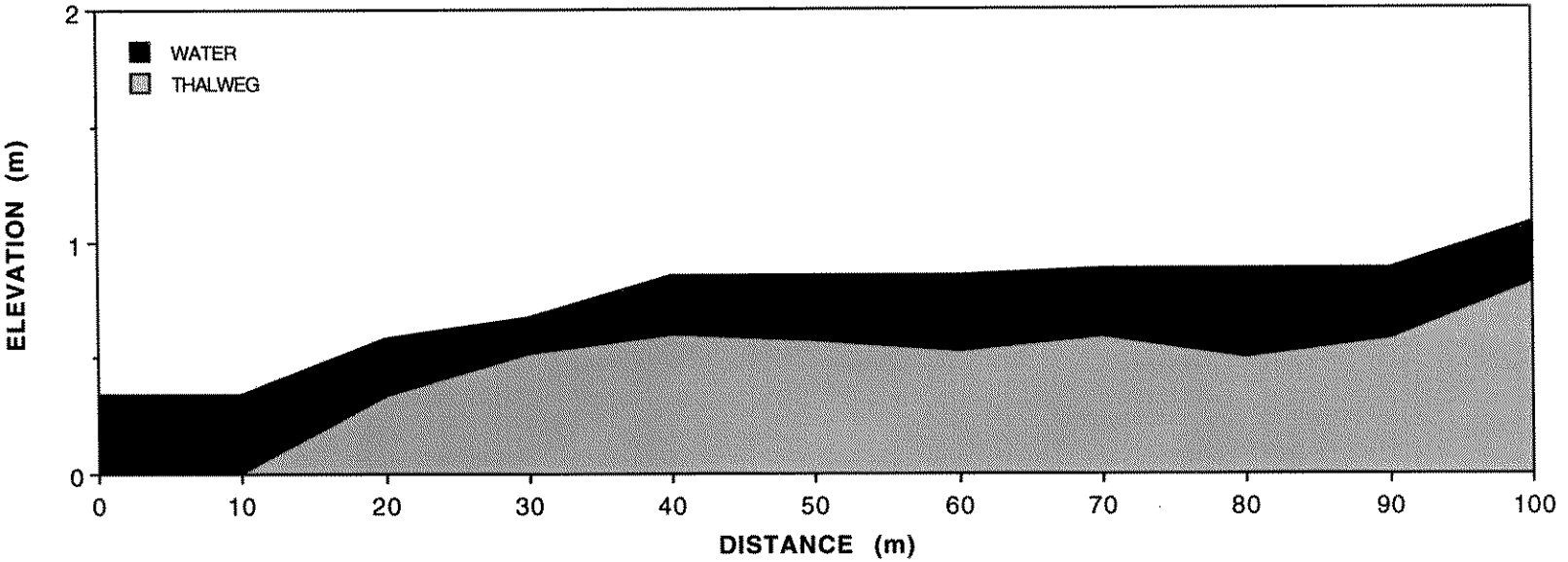
A: Topview of bankfull channel (100 m). contour interval 0.1 m

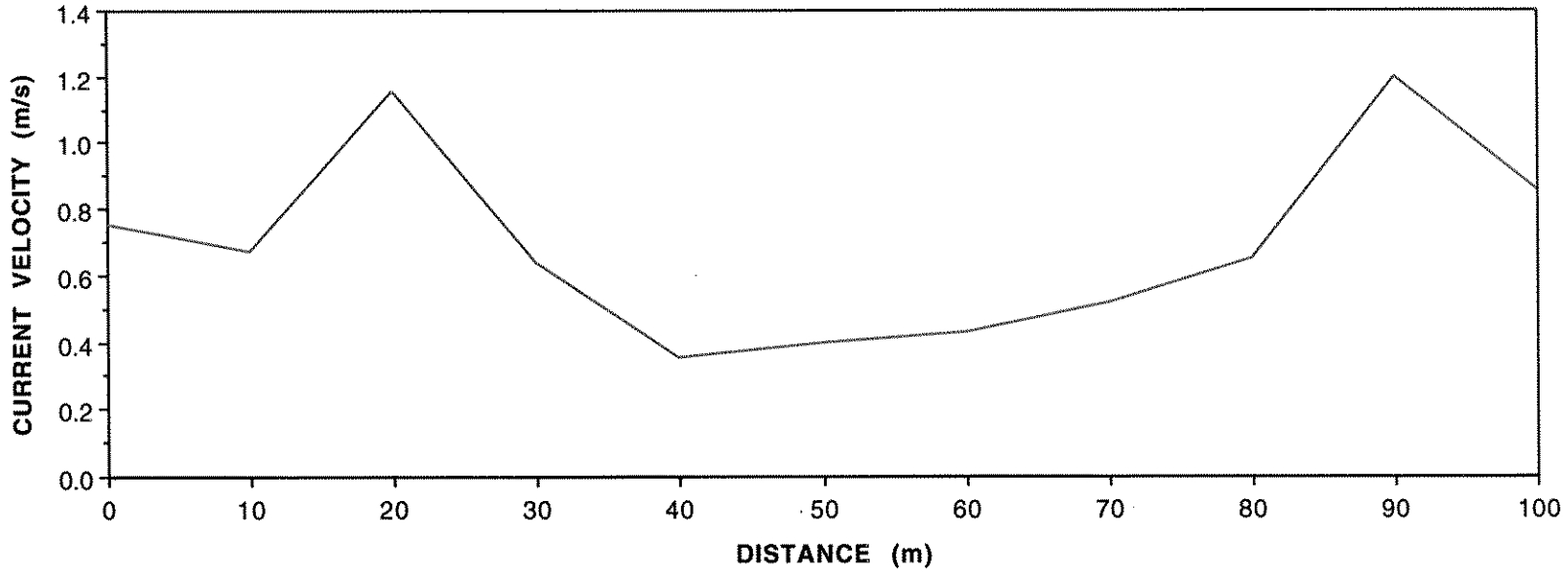



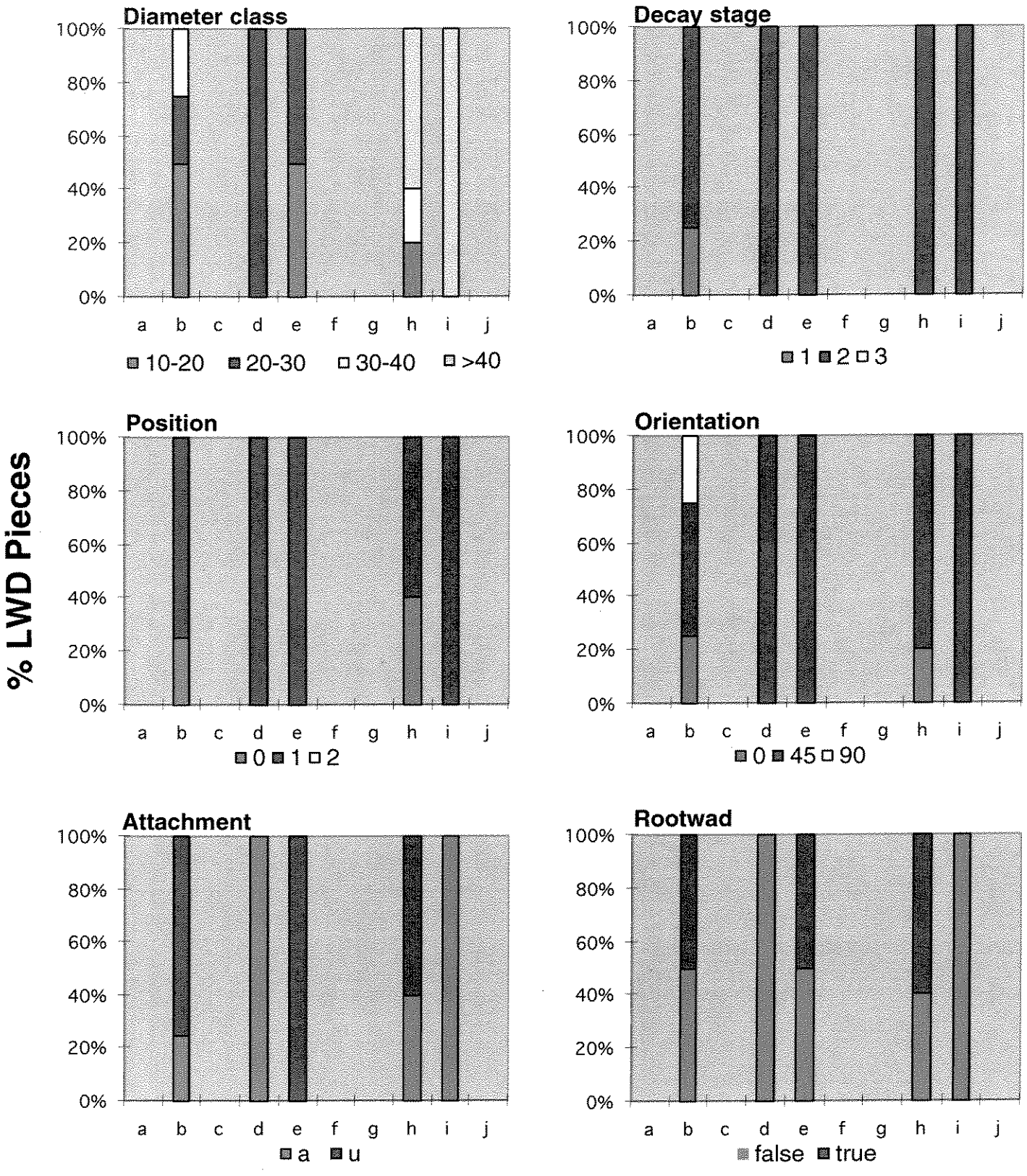



## Ole Creek Reach A

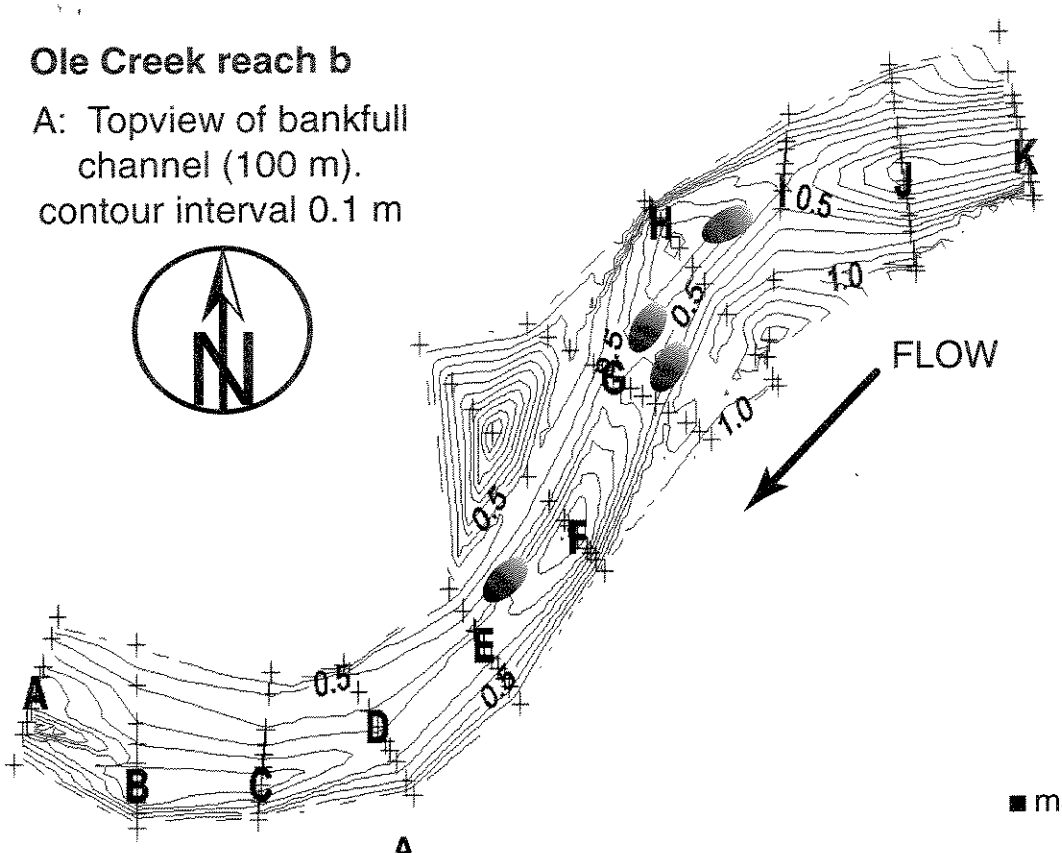



% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Ole Creek reach b**

A: Topview of bankfull channel (100 m). contour interval 0.1 m

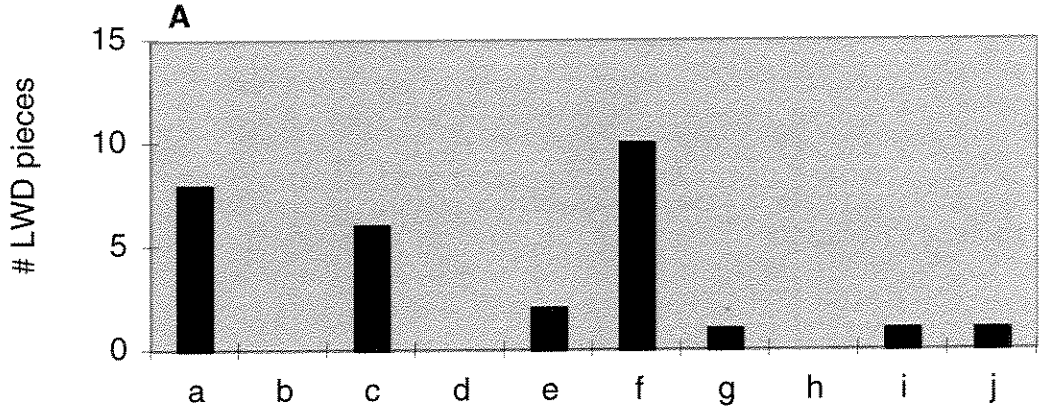


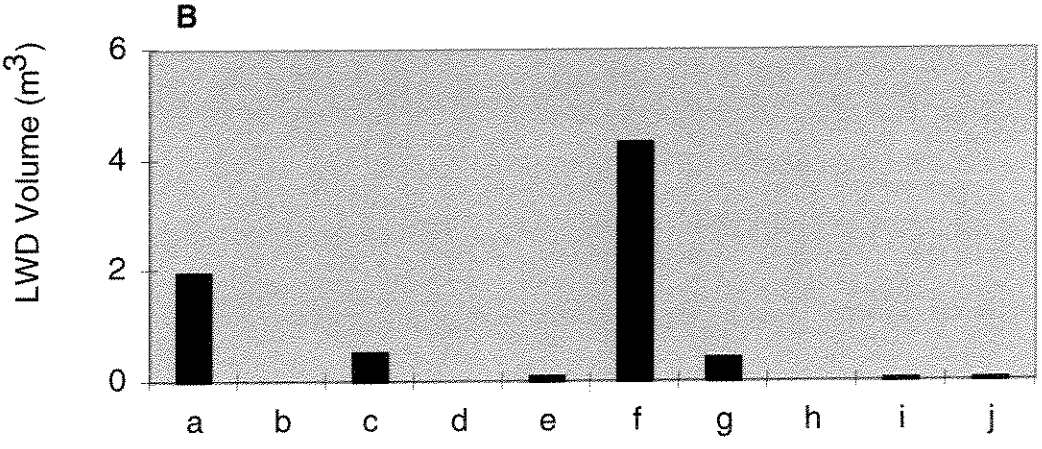

A Thalweg location

\+ Survey point

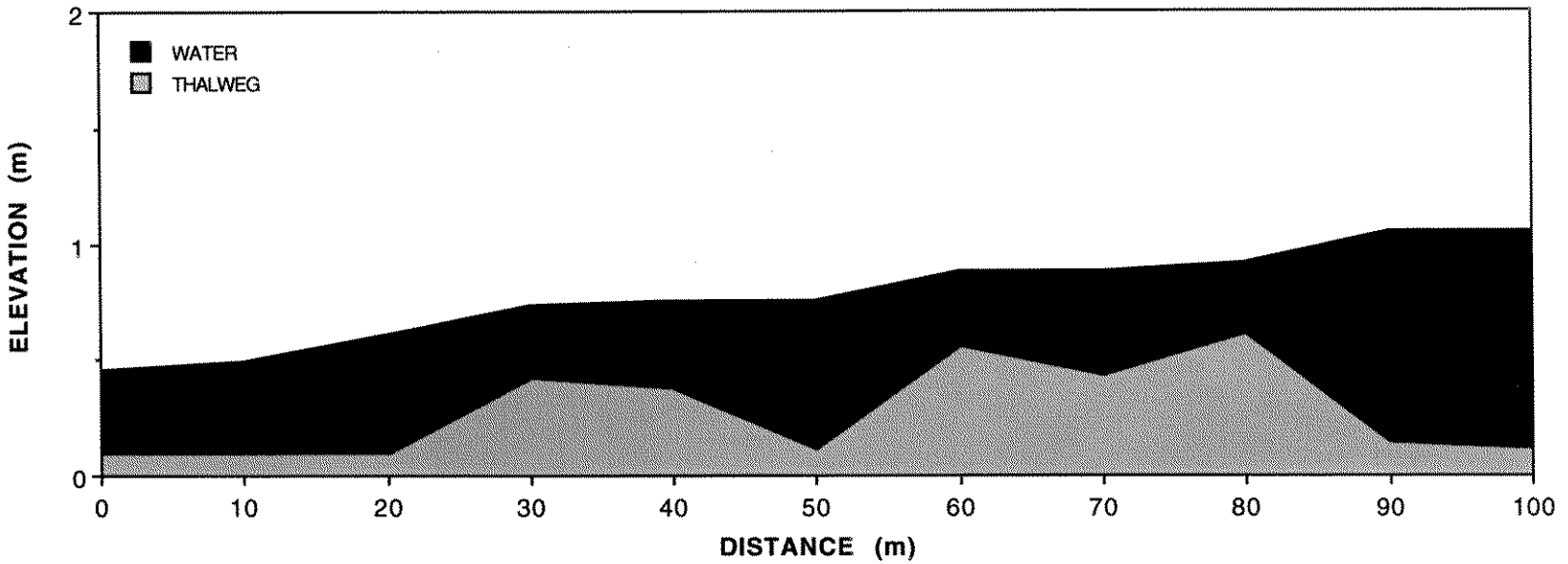
Bull trout redd

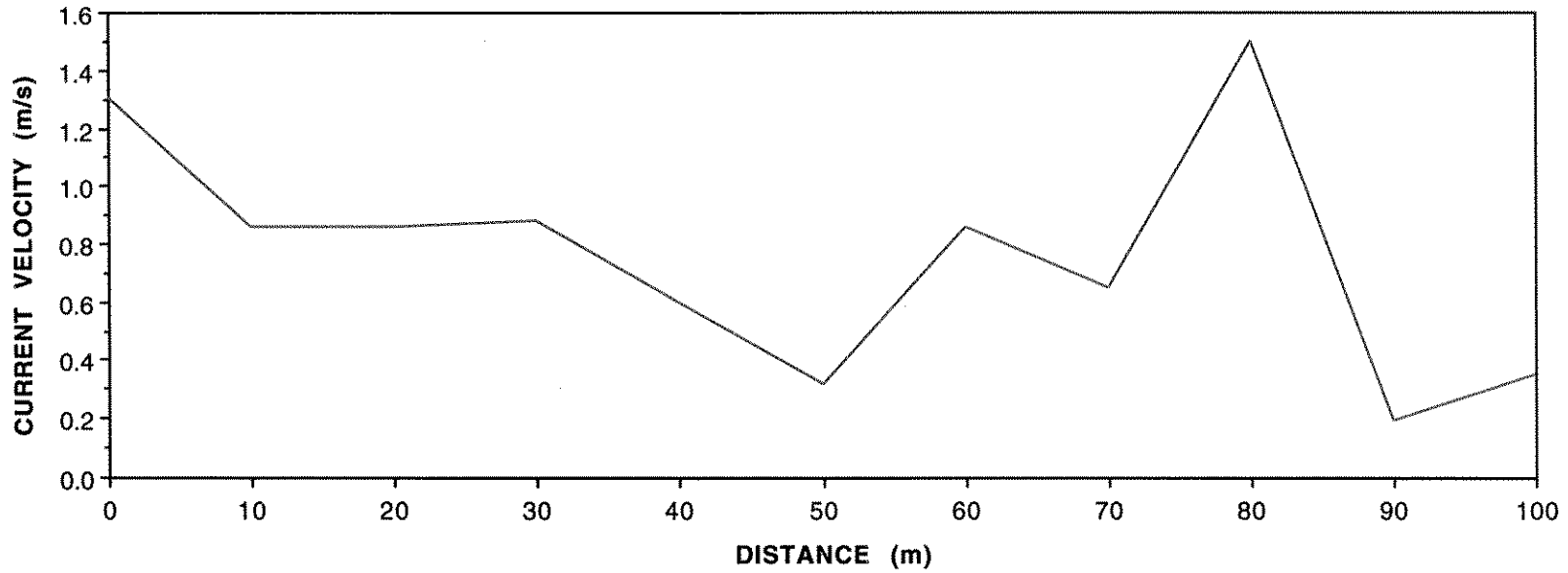
■ main channel

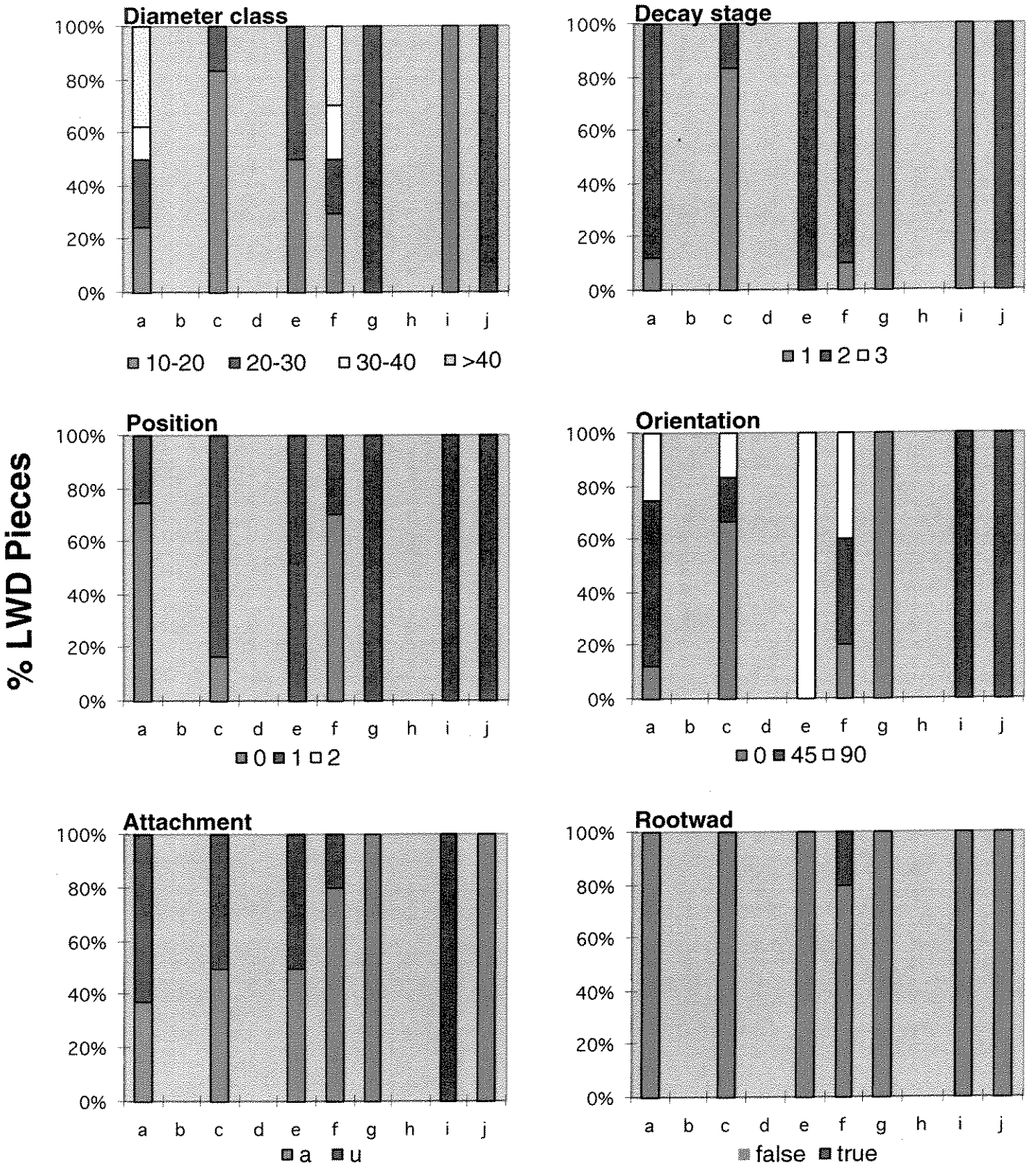


Ole Creek Reach B

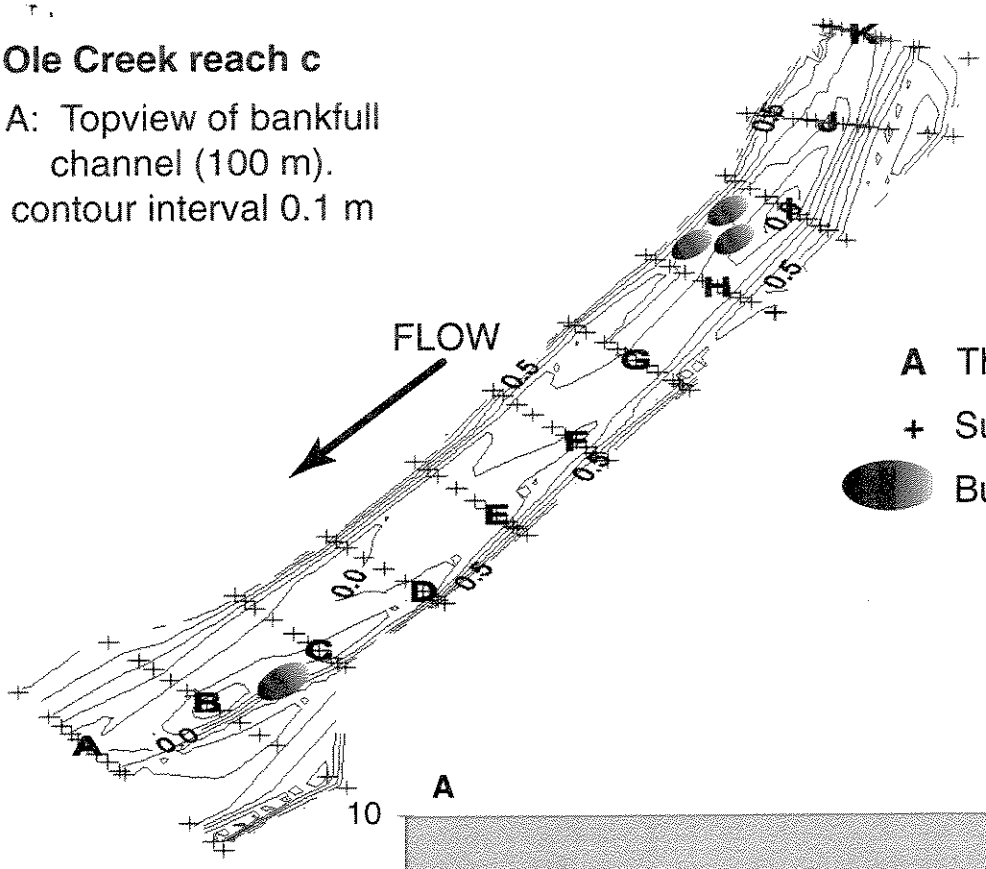


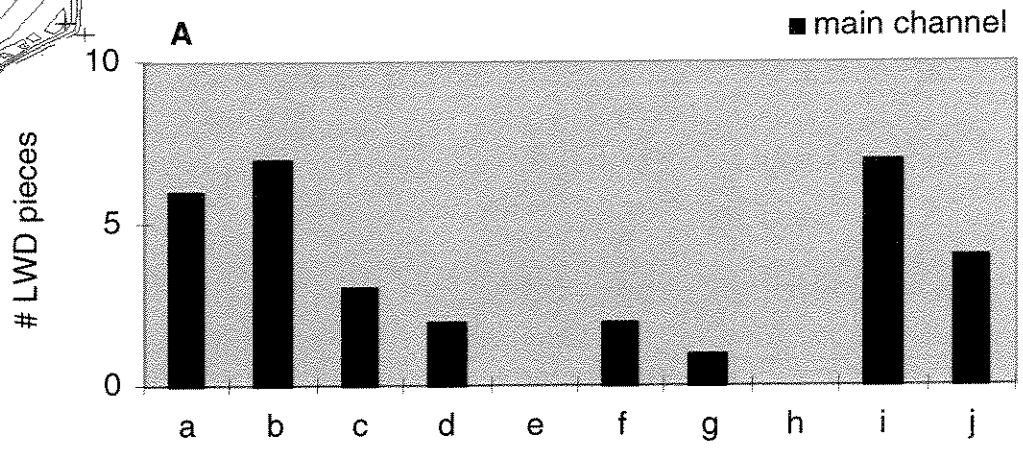



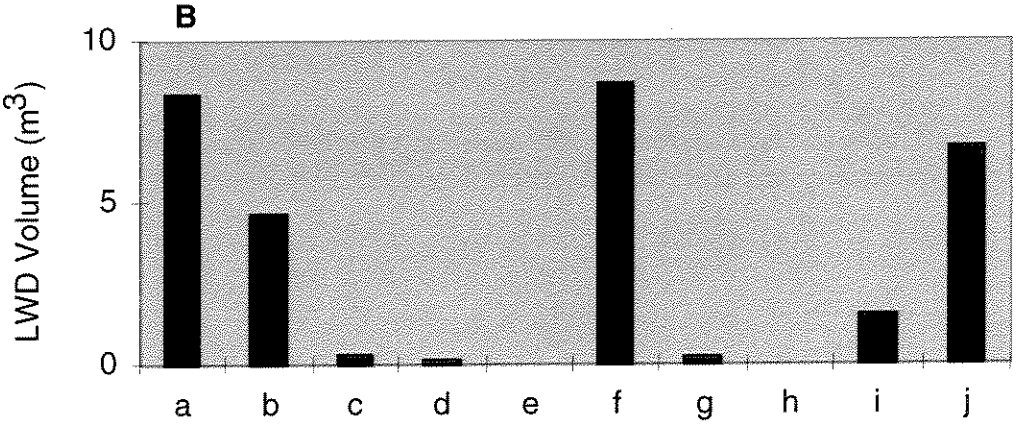

% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Ole Creek reach c**

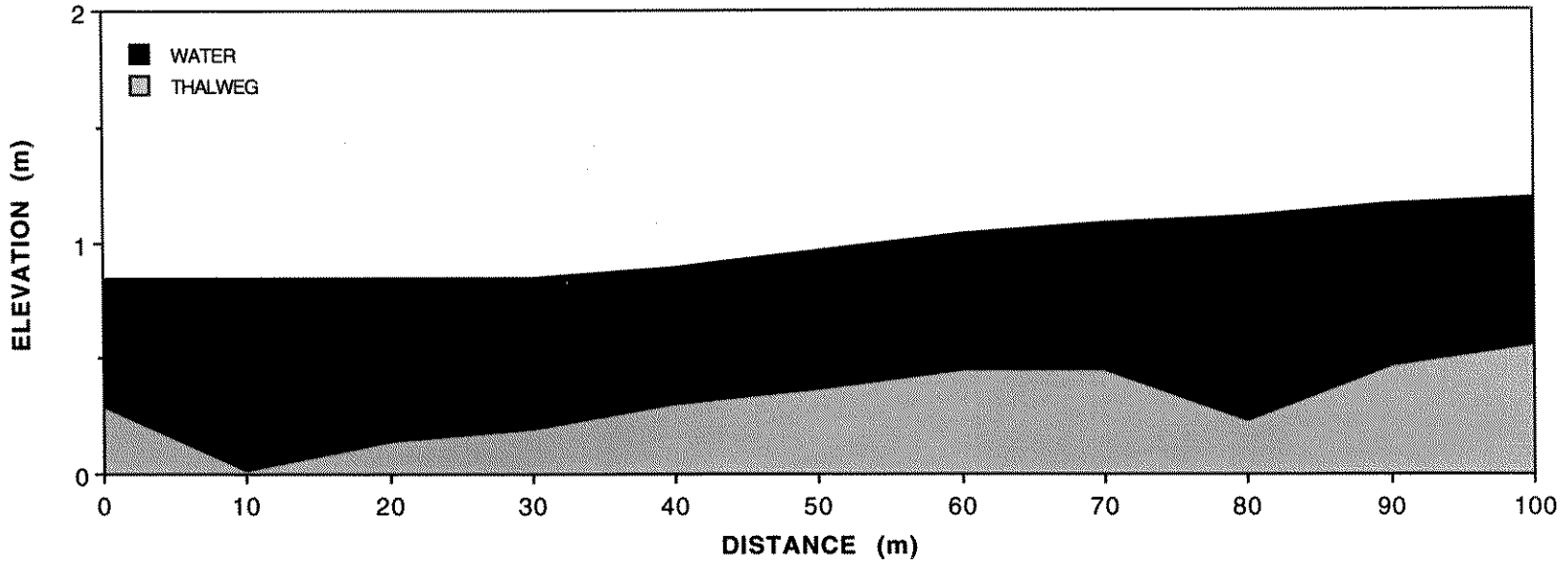
A: Topview of bankfull channel (100 m). contour interval 0.1 m

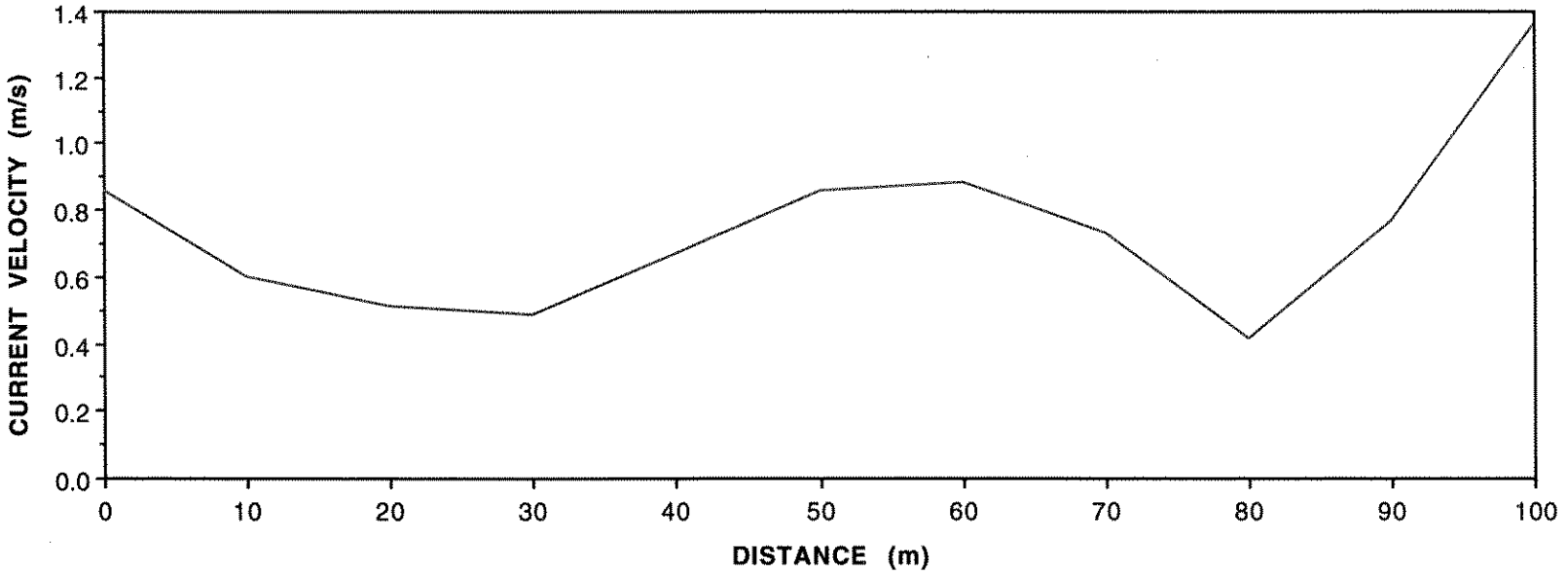


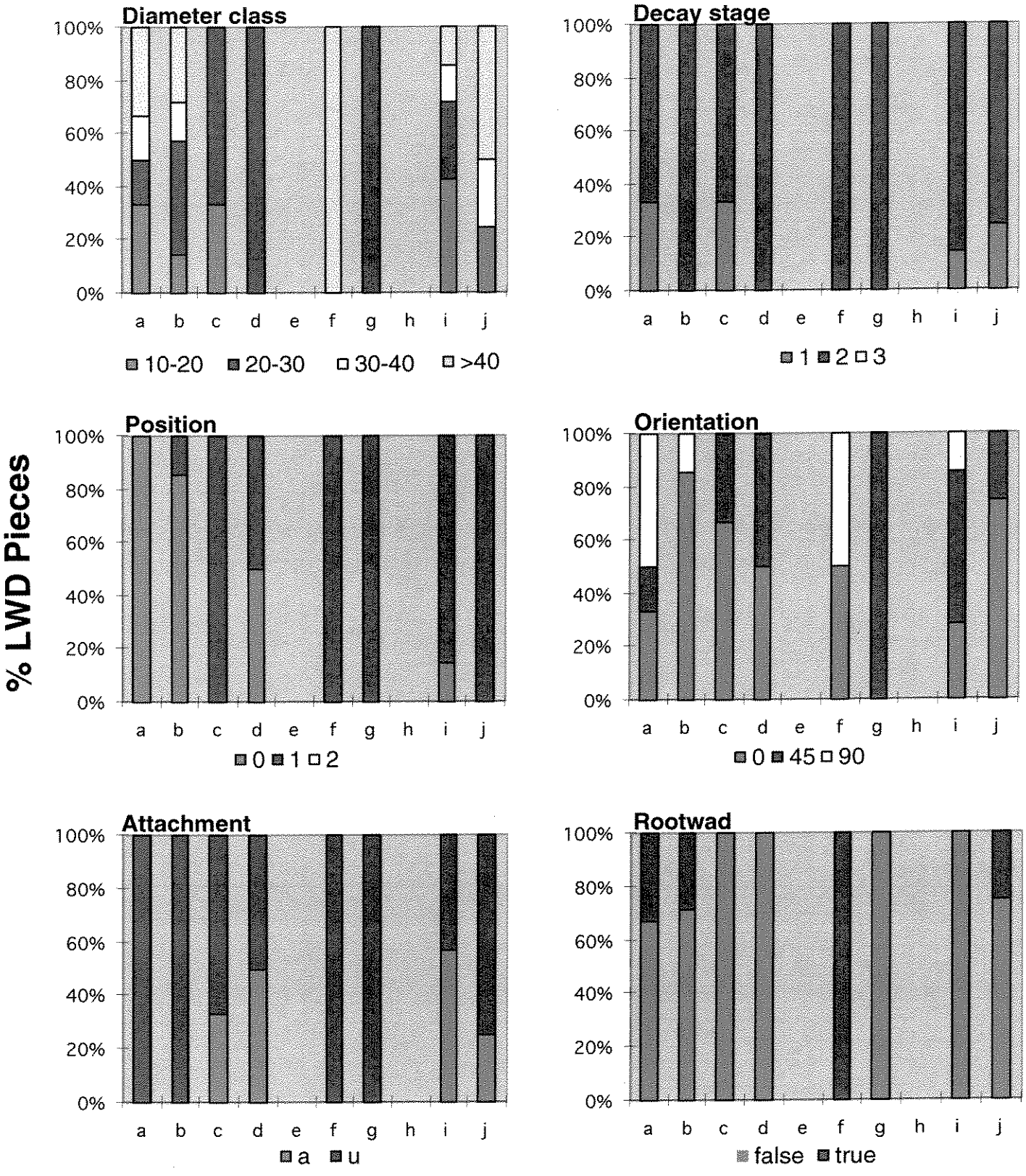



## Ole Creek Reach C

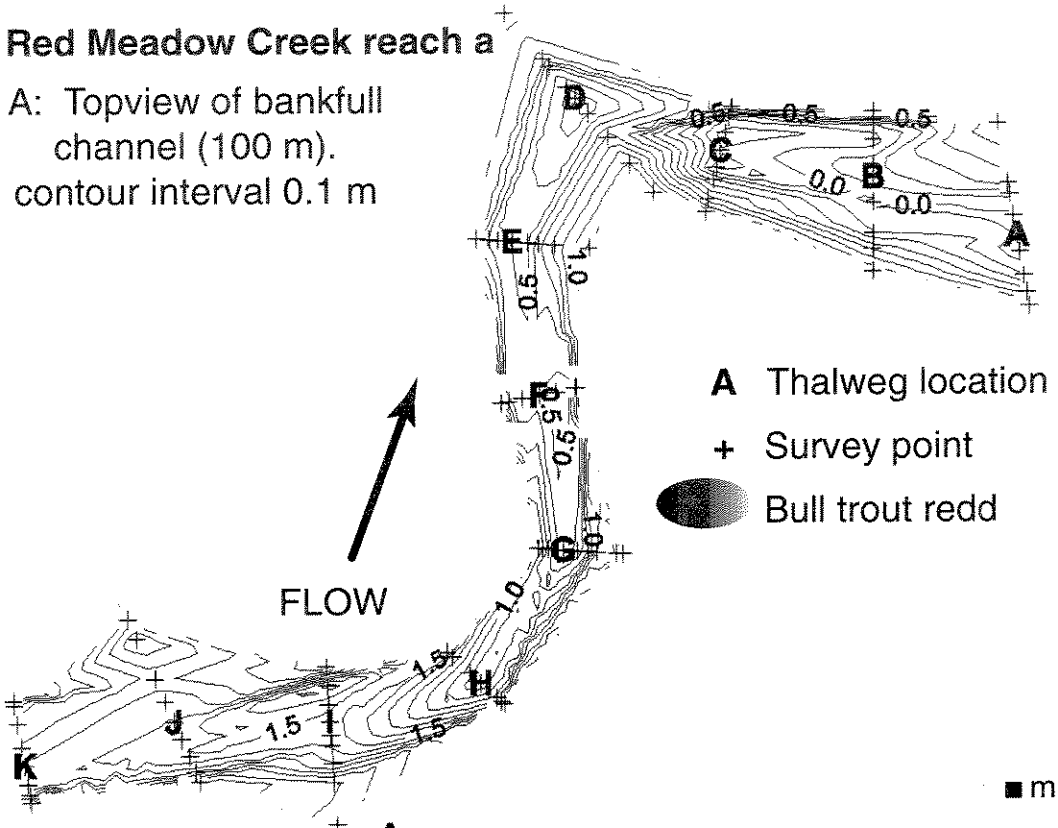



% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Red Meadow Creek reach a**

A: Topview of bankfull channel (100 m). contour interval 0.1 m

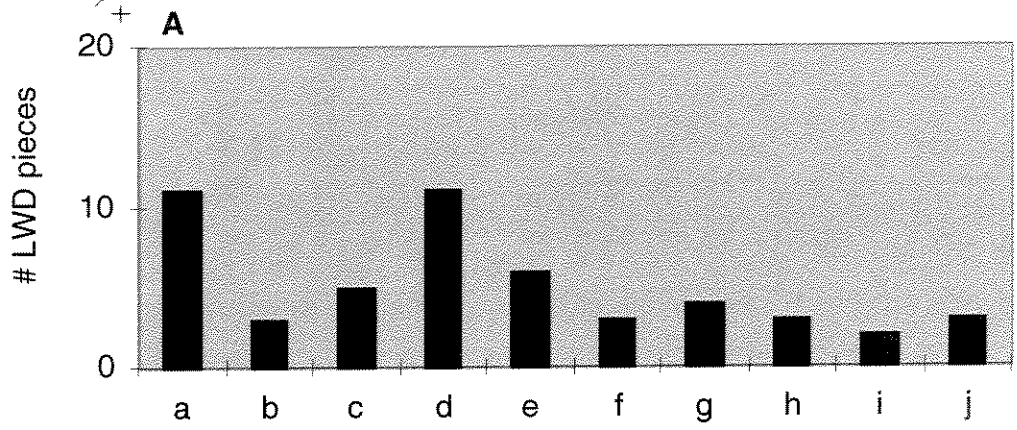


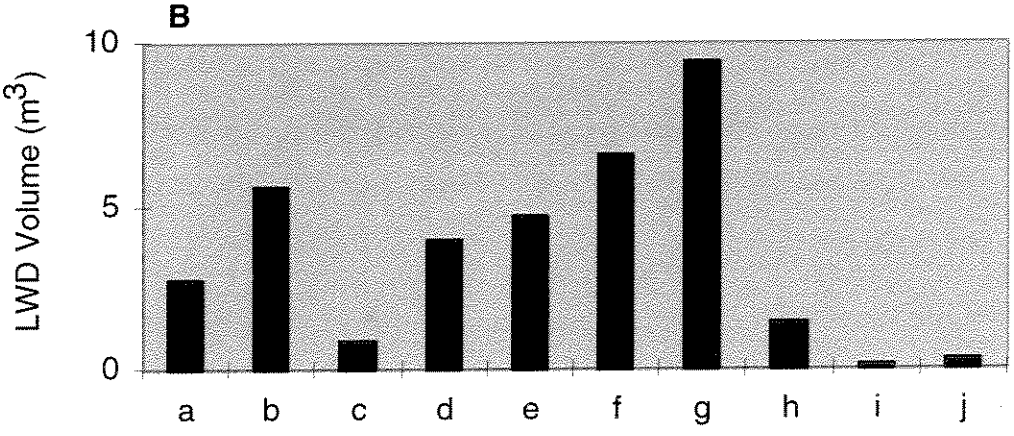

A Thalweg location

\+ Survey point

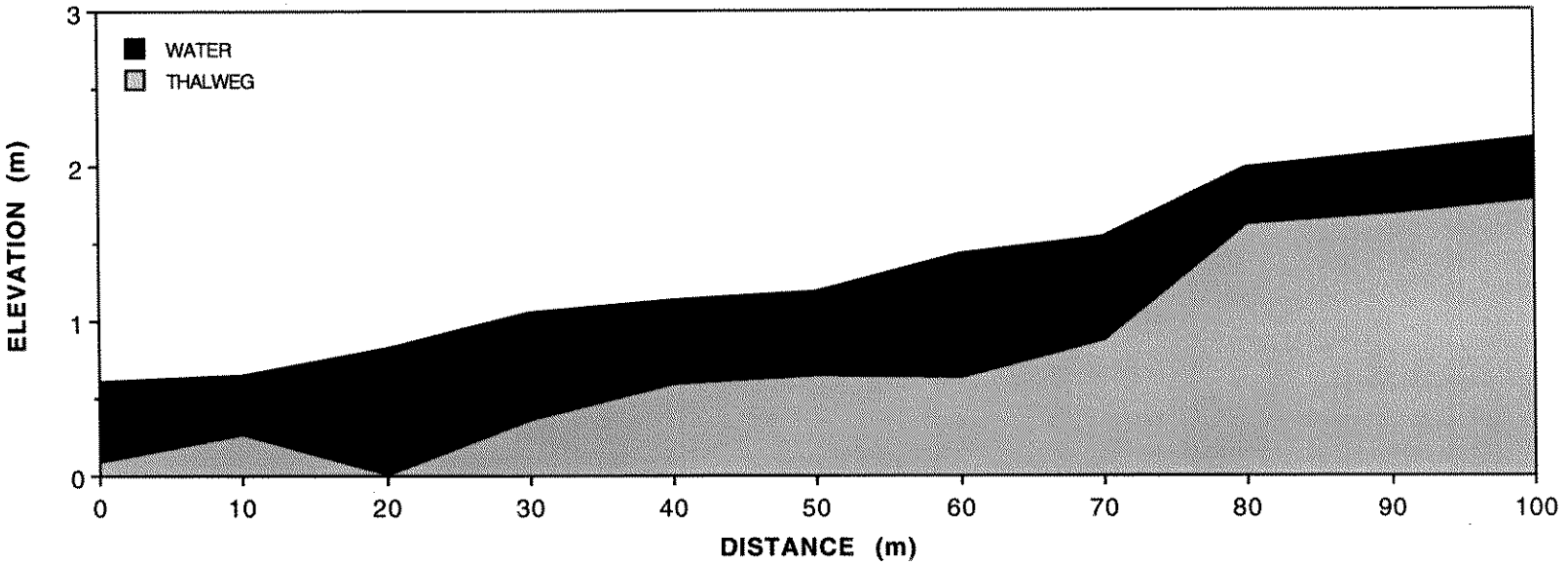
Bull trout redd

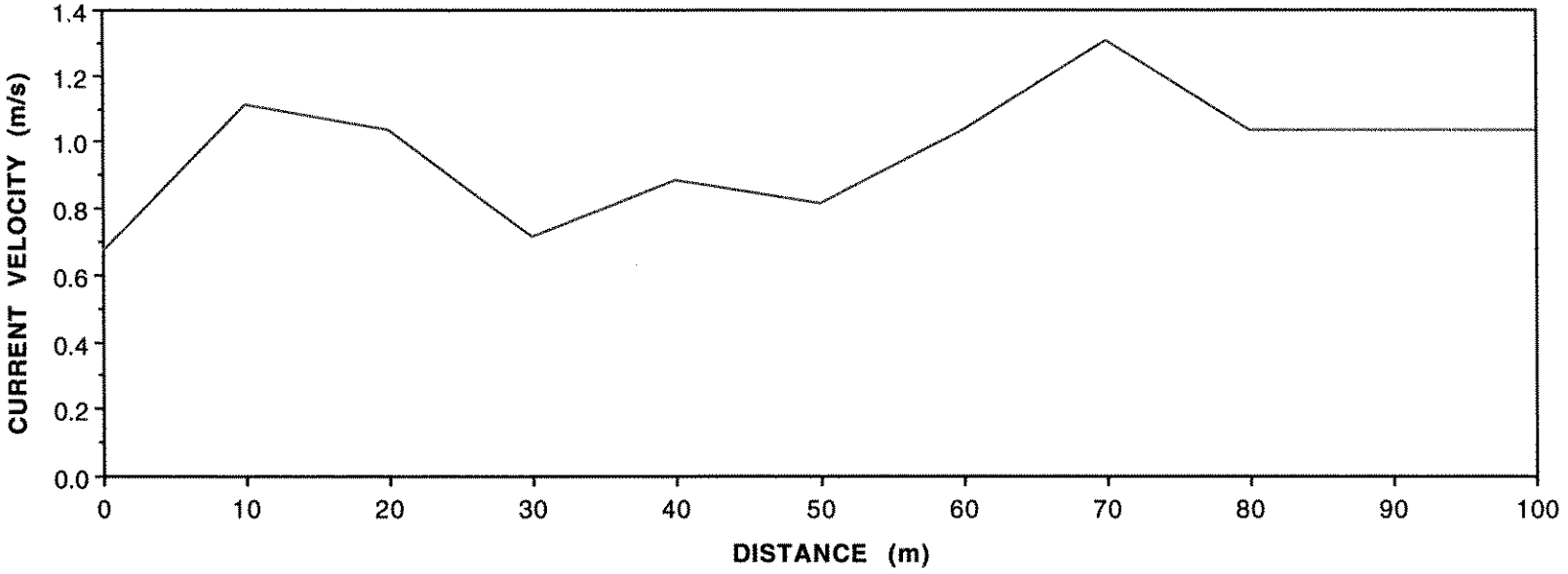
■ main channel

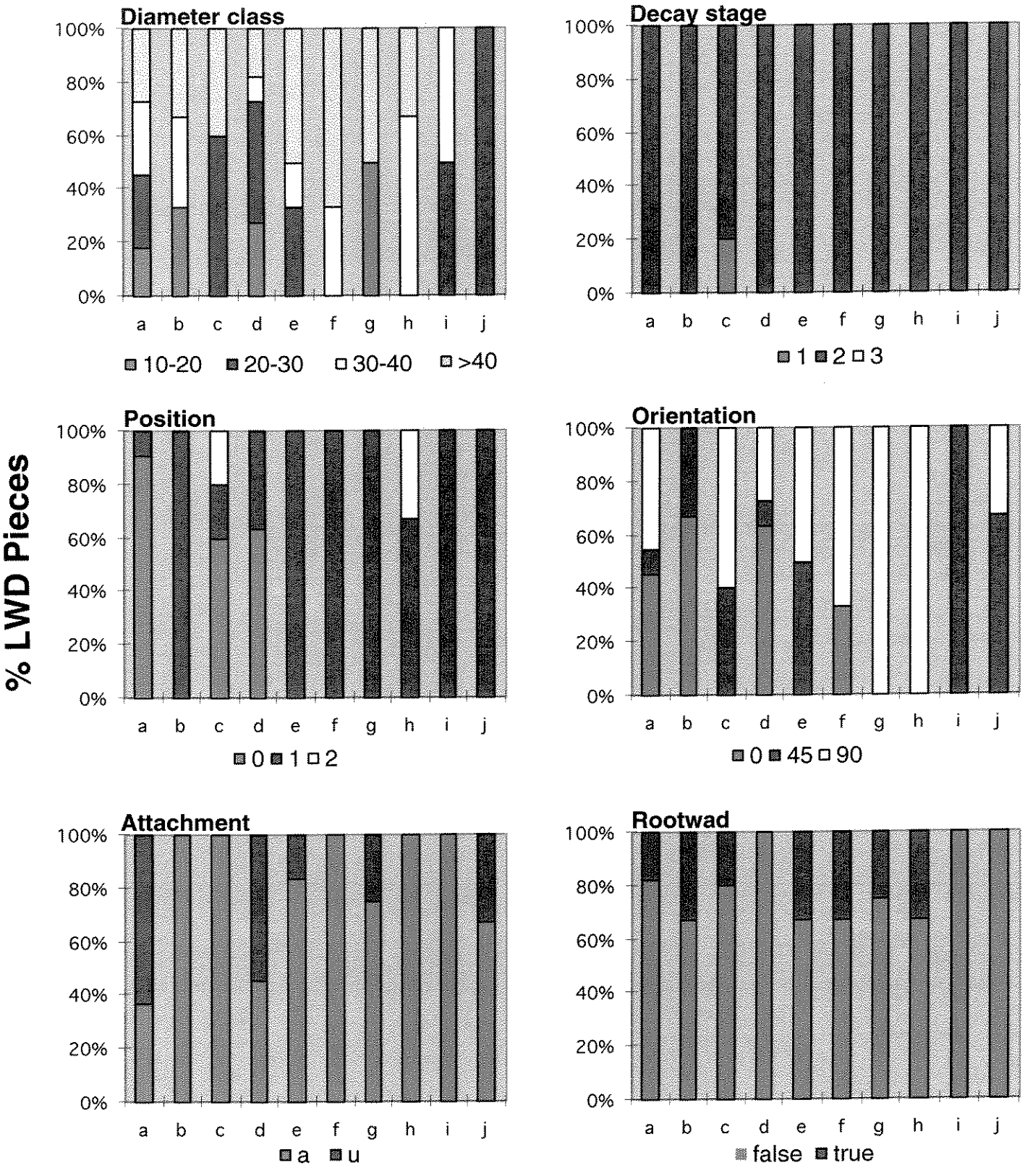


## Red Meadow Creek Reach A

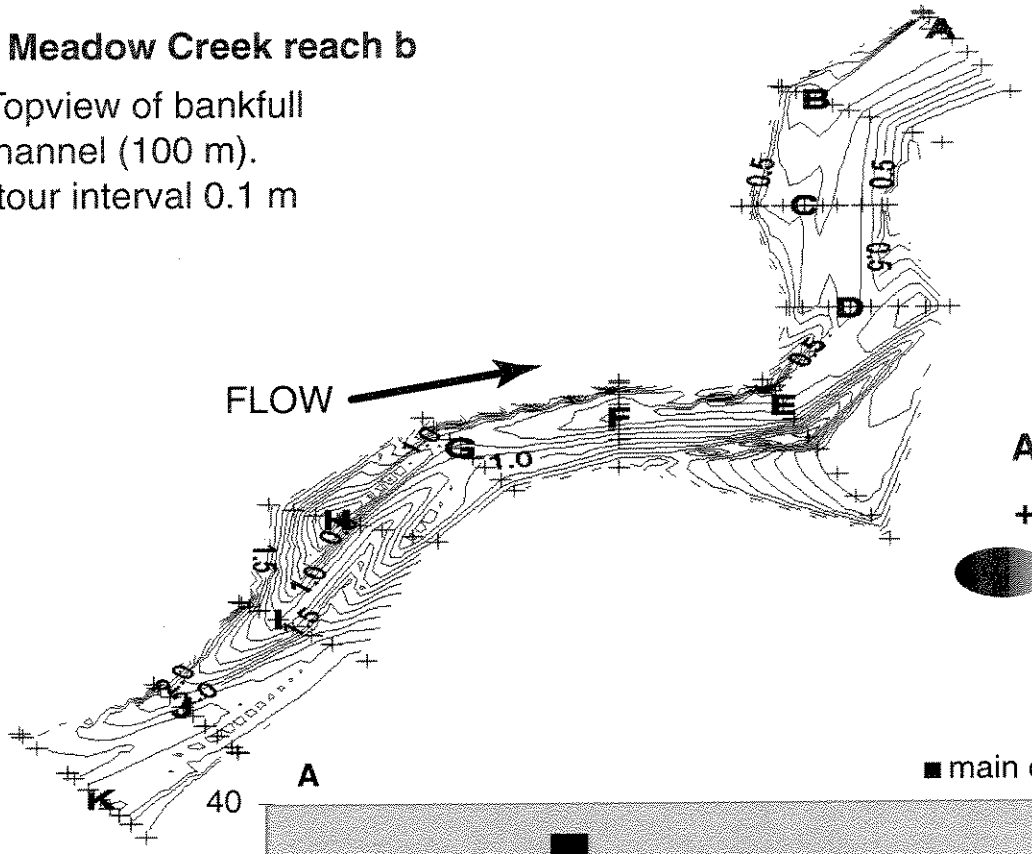


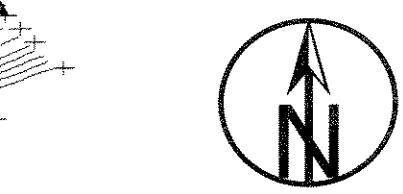




% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Red Meadow Creek reach b**

A: Topview of bankfull channel (100 m). contour interval 0.1 m

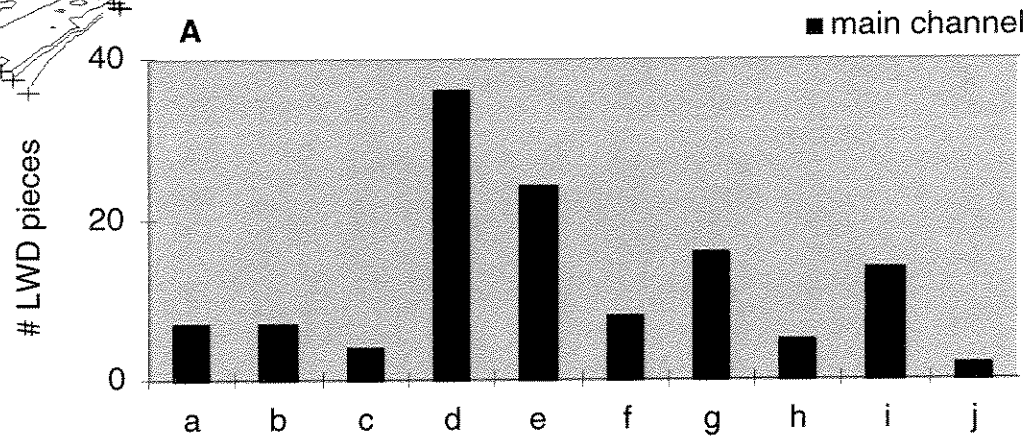


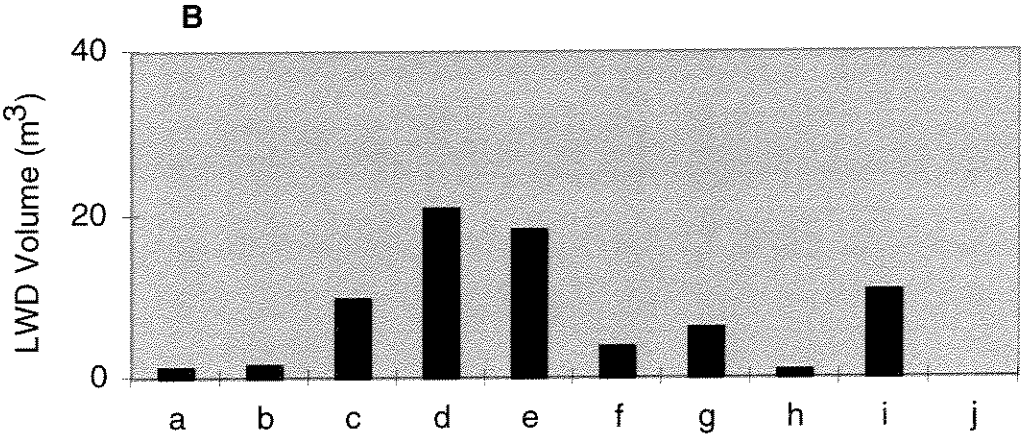



A Thalweg location

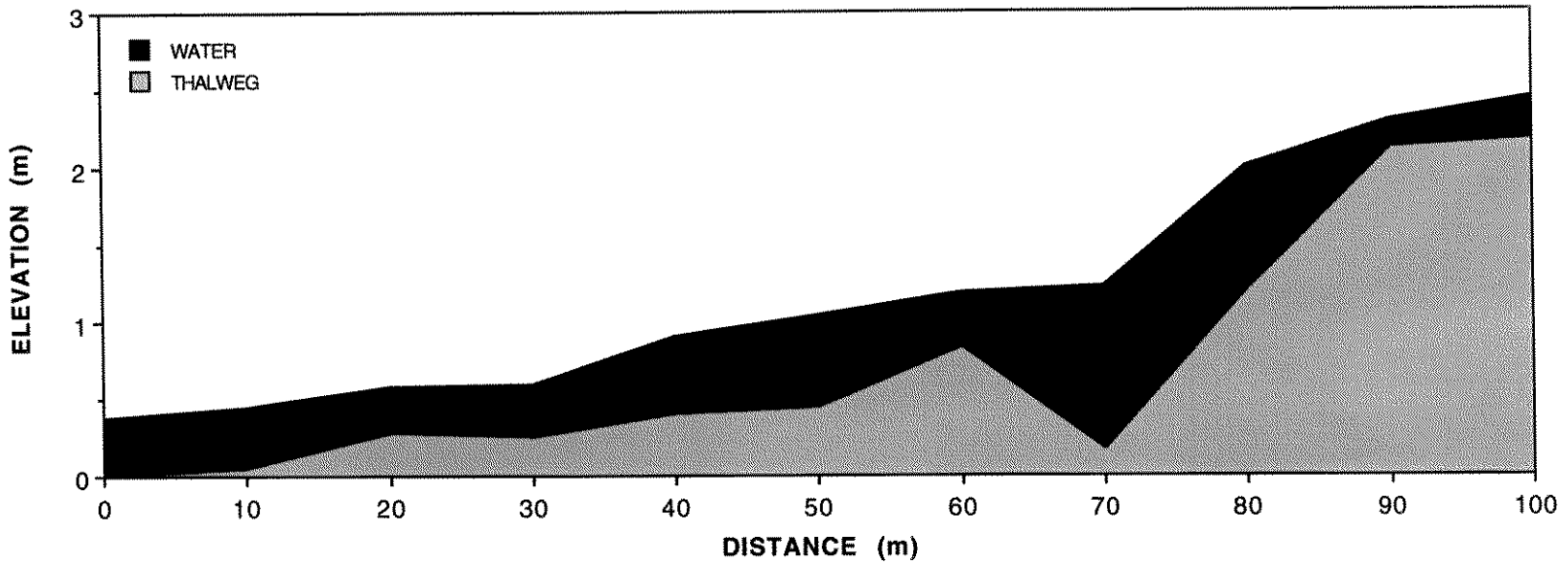
\+ Survey point

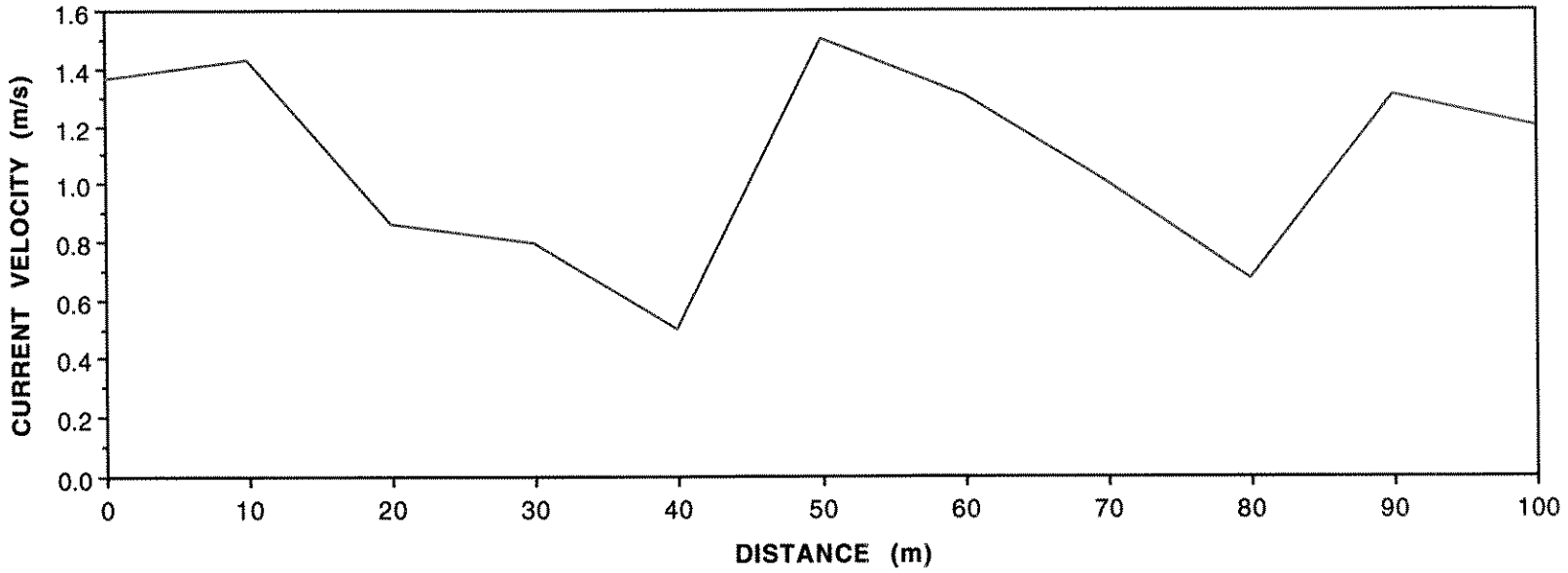
Bull trout redd

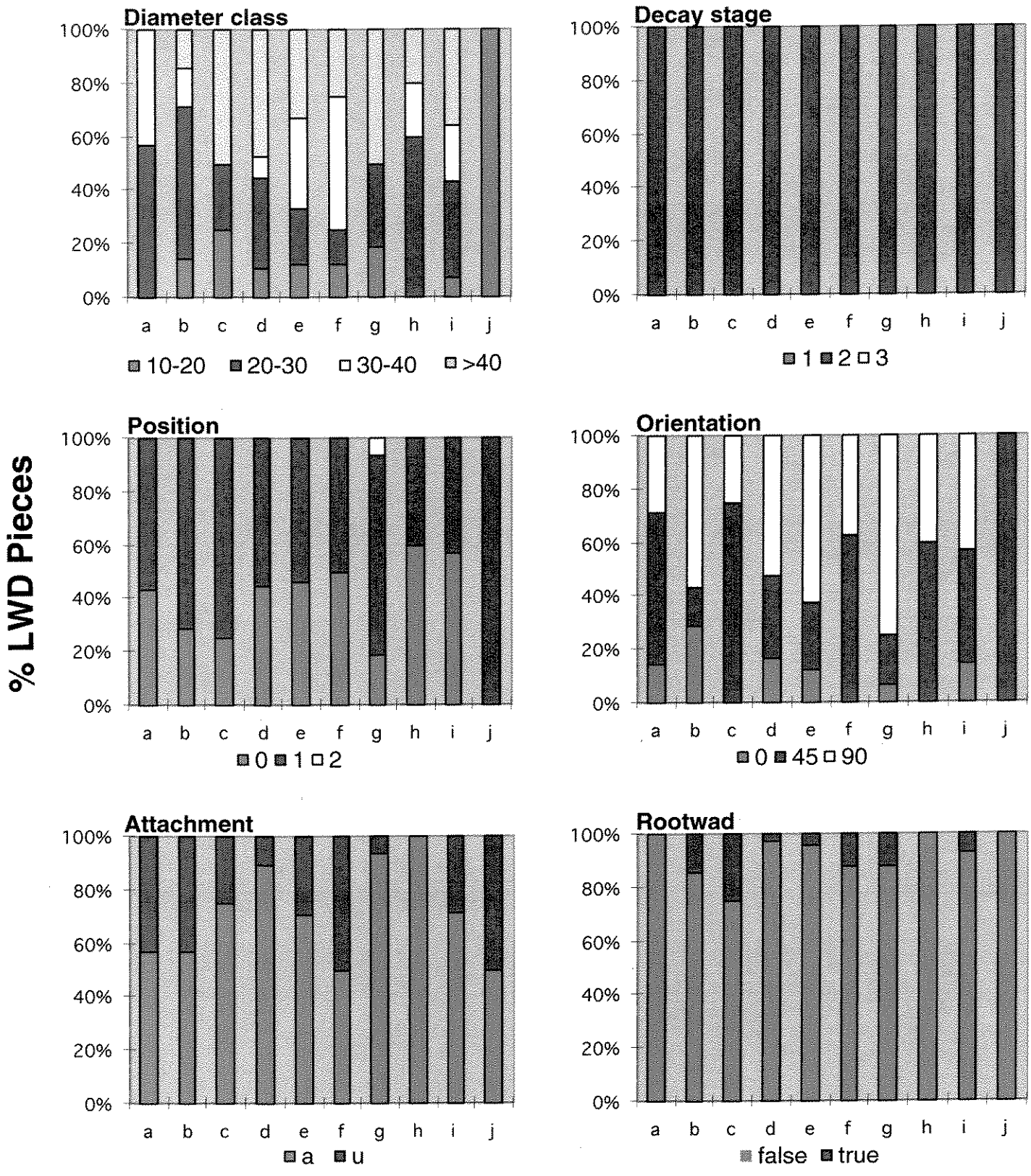


## Red Meadow Creek Reach B

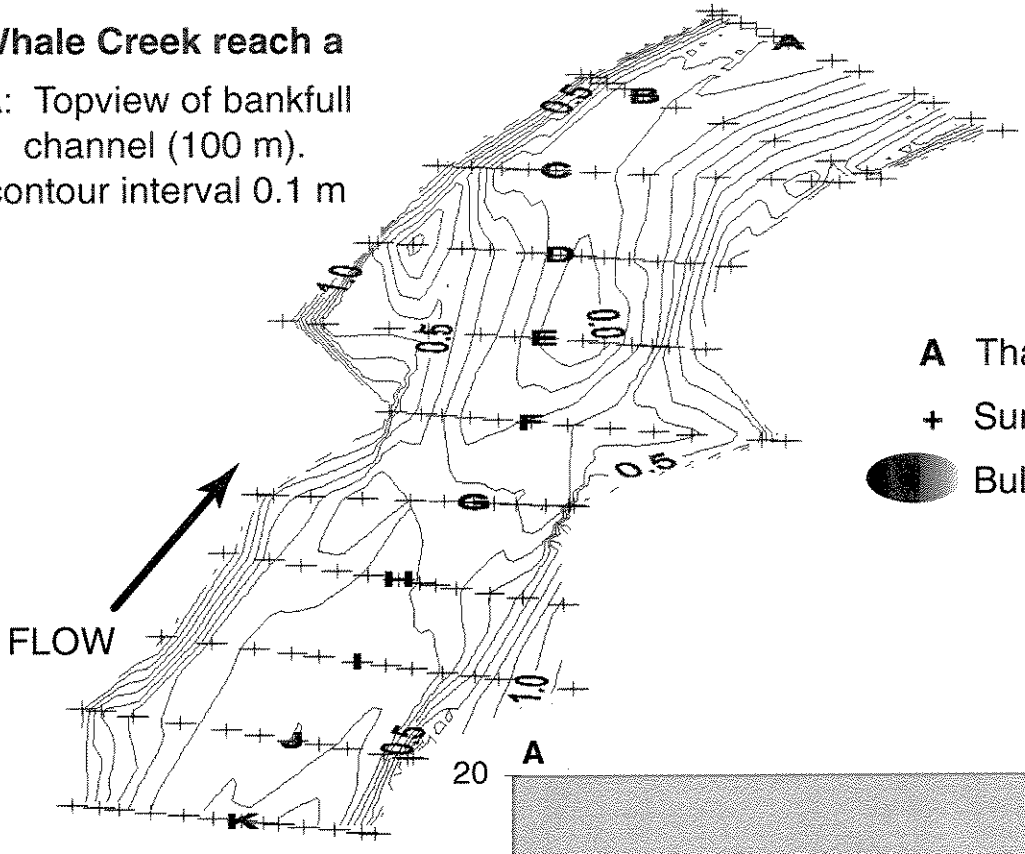



% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Whale Creek reach a**

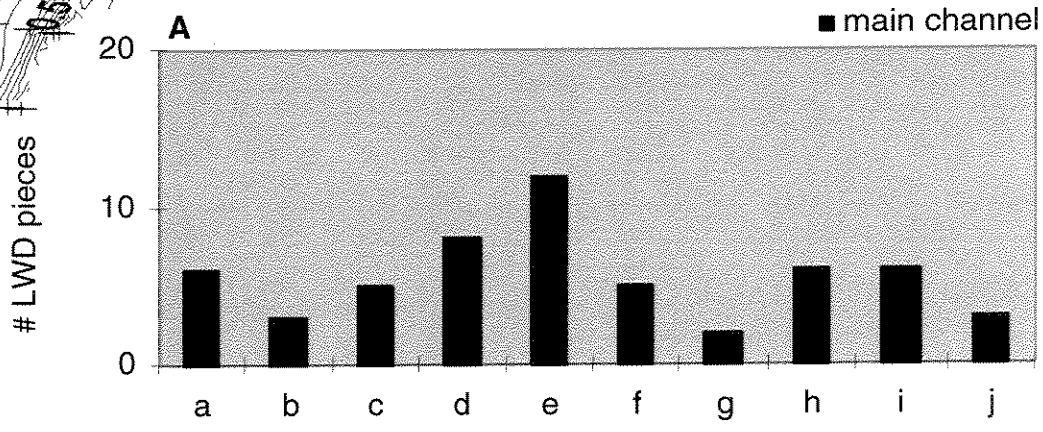
A: Topview of bankfull channel (100 m). contour interval 0.1 m

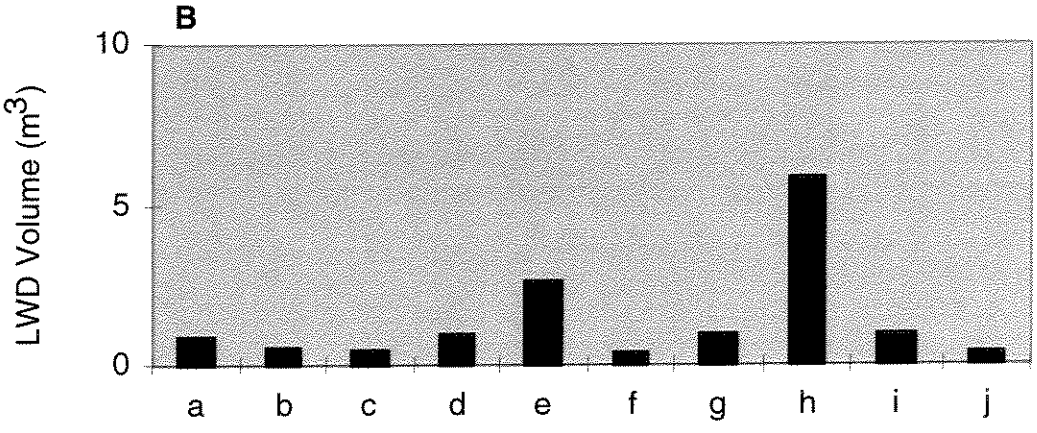



A Thalweg location

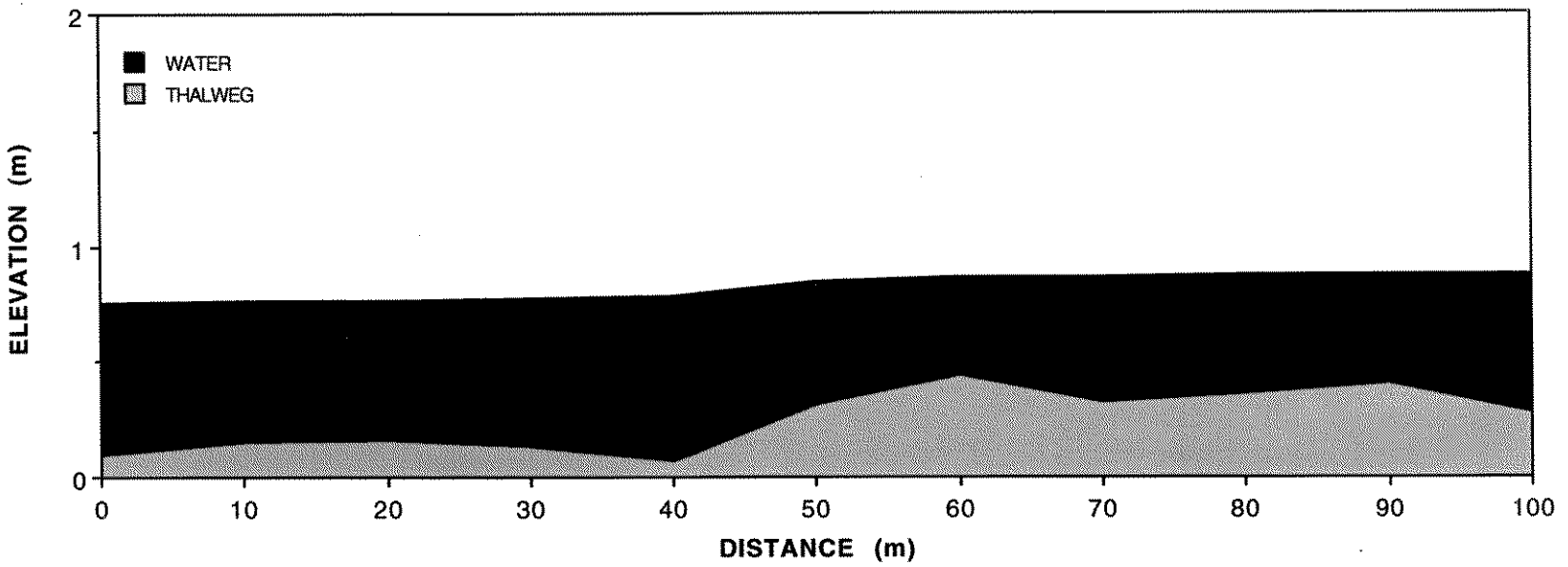
\+ Survey point

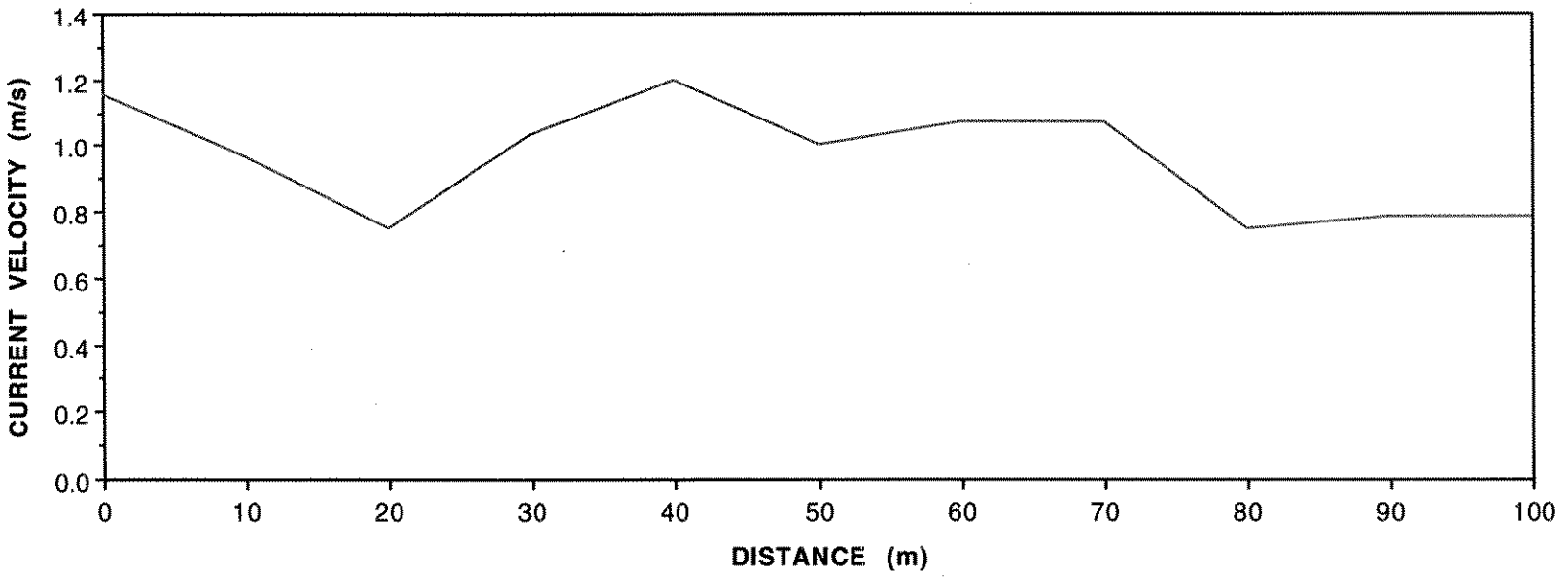
Bull trout redd

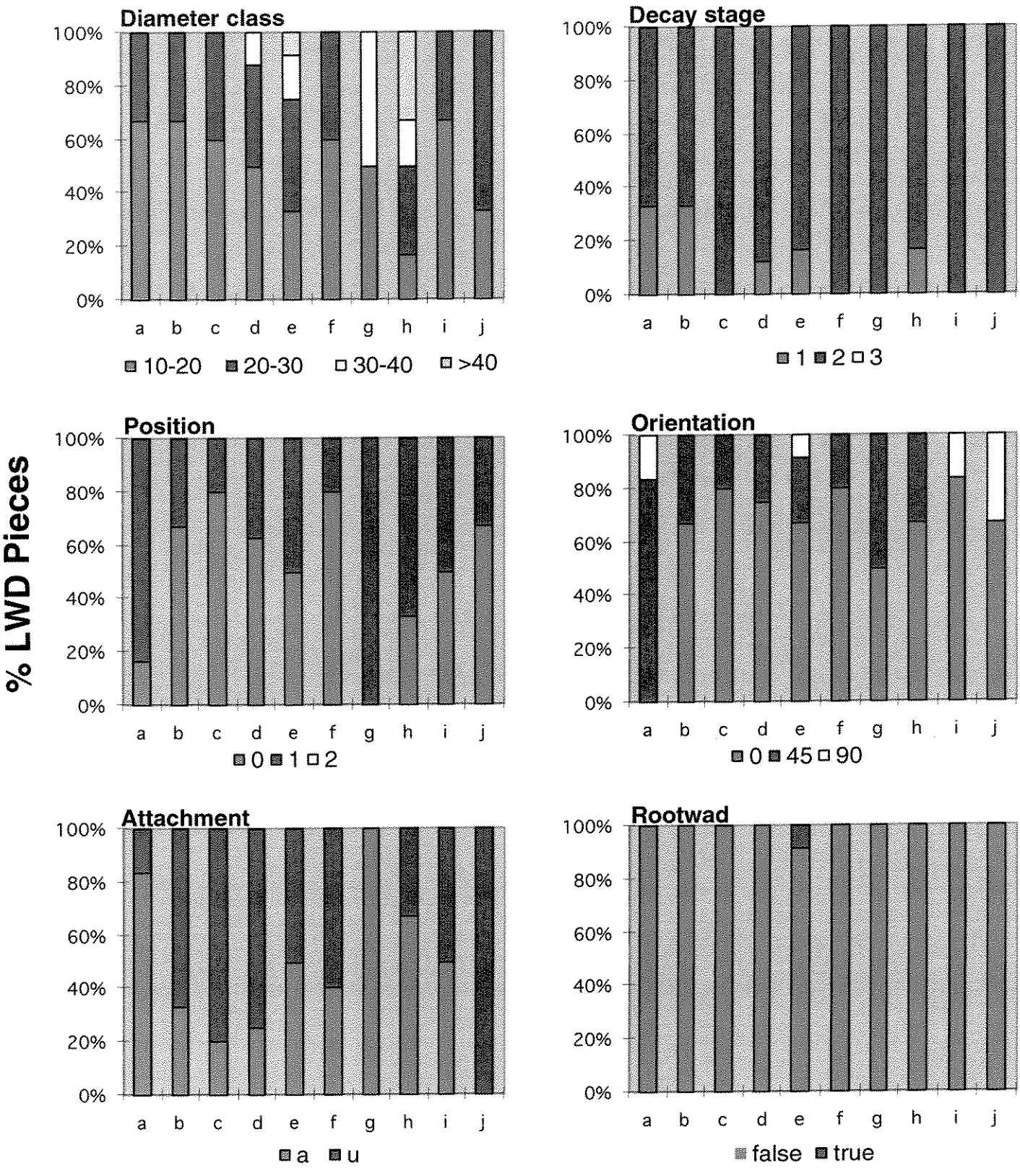


## Whale Creek Reach A

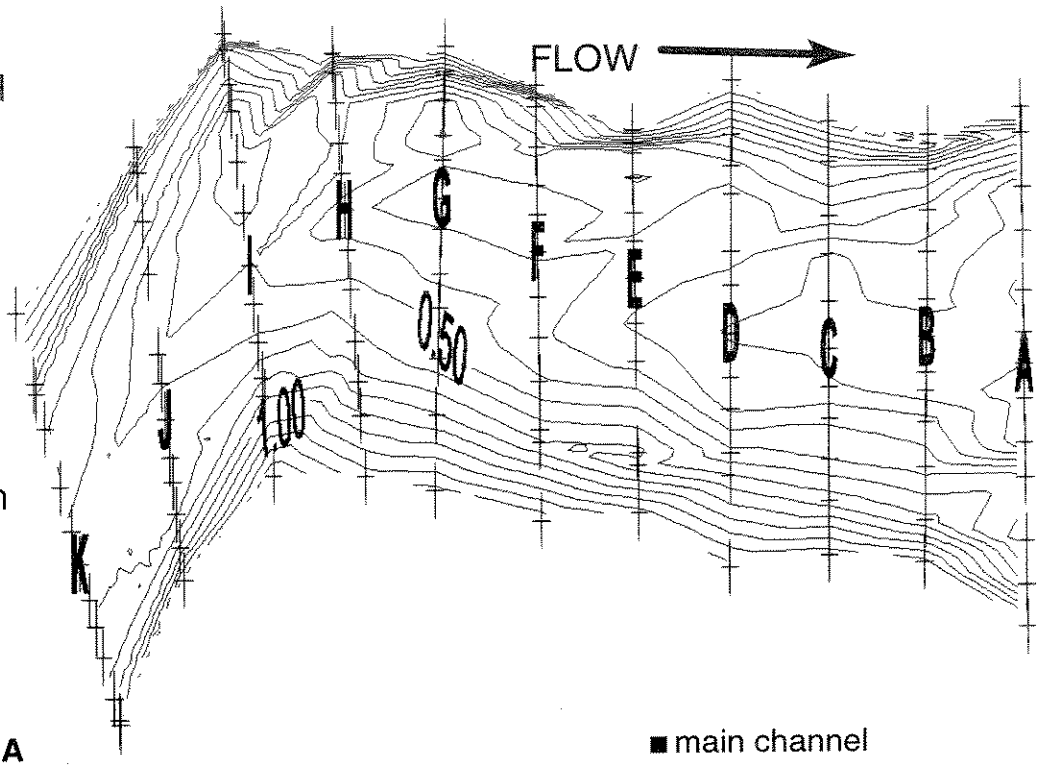



% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Whale Creek reach b**

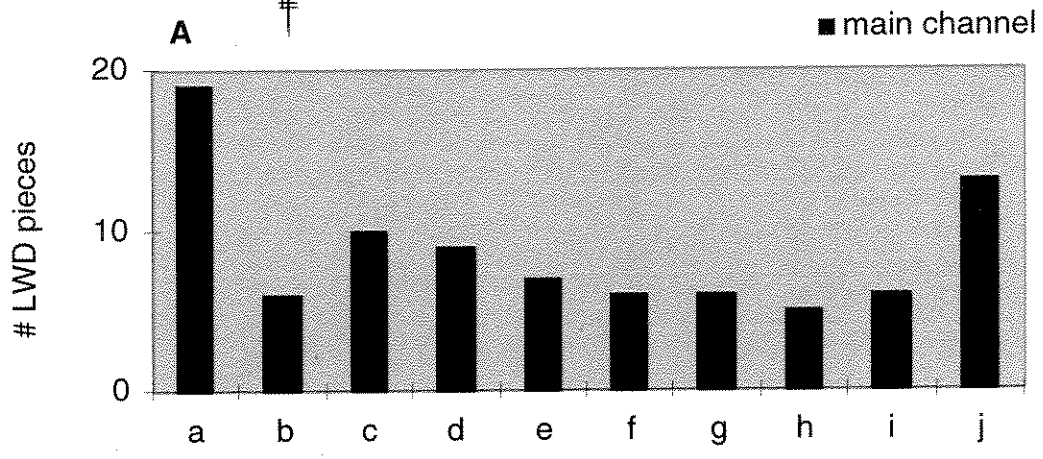
A: Topview of bankfull channel (100 m). contour interval 0.1 m

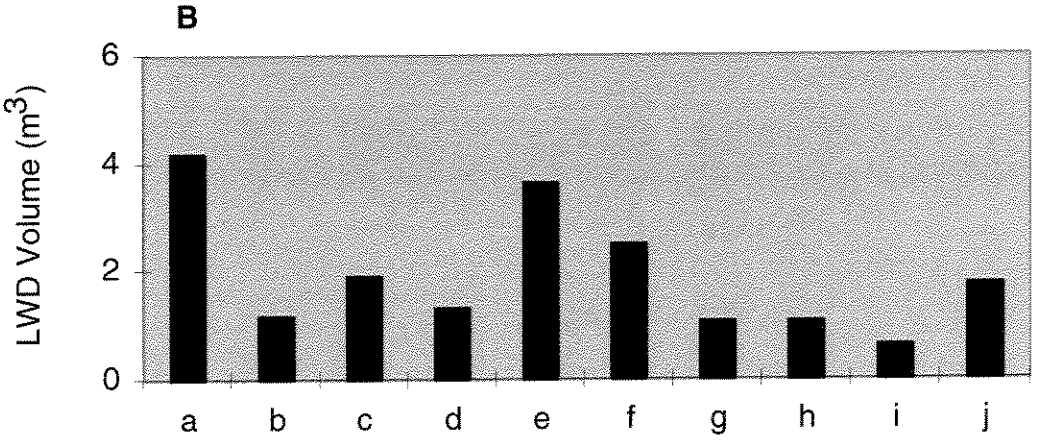



**A** Thalweg location

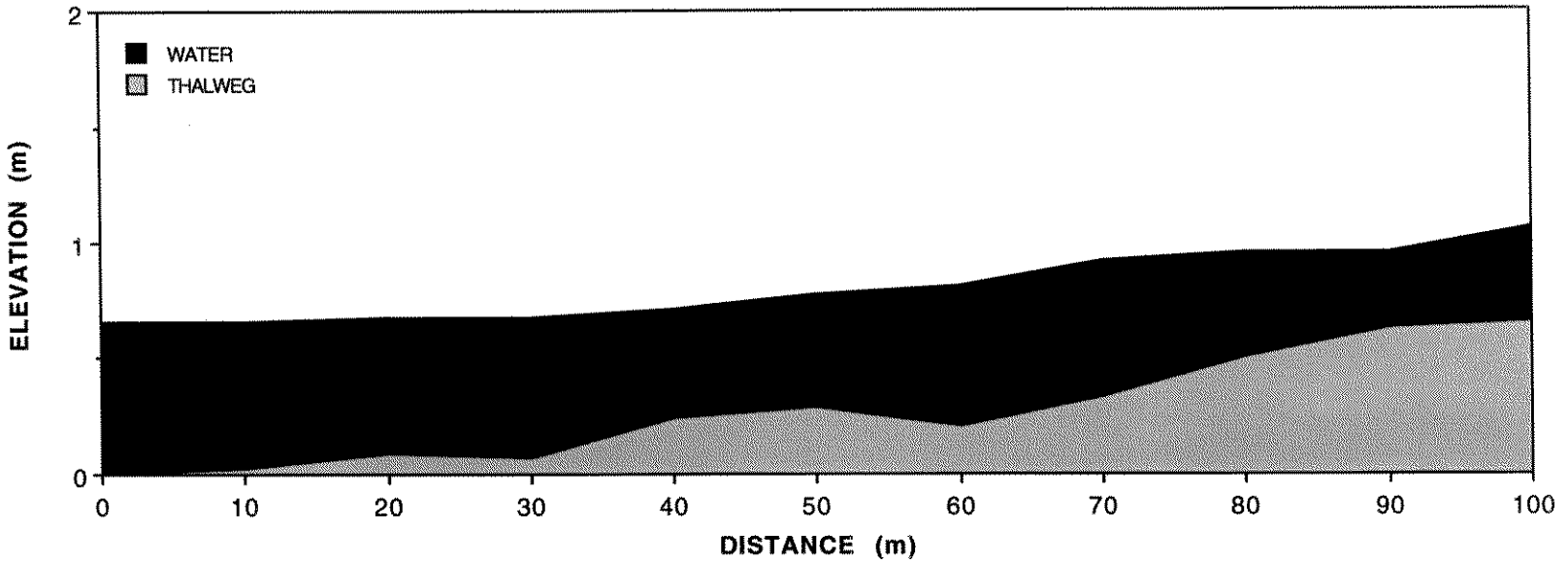
\+ Survey point

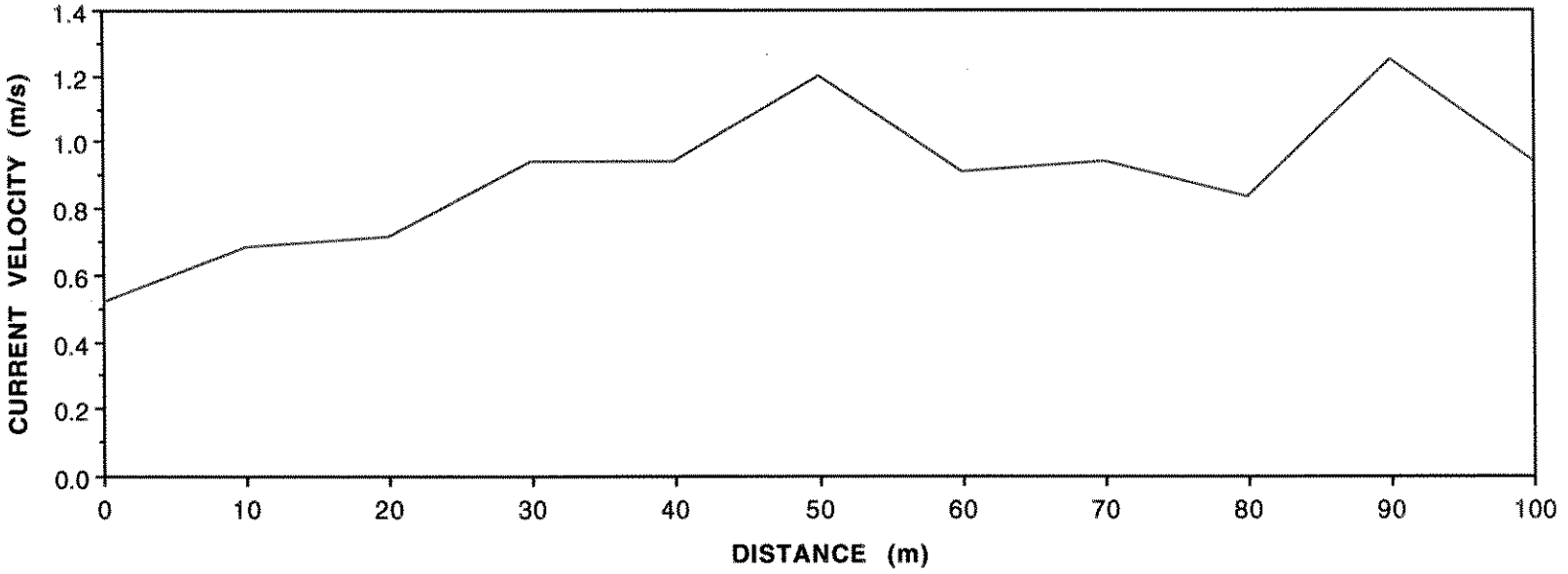
Bull trout redd

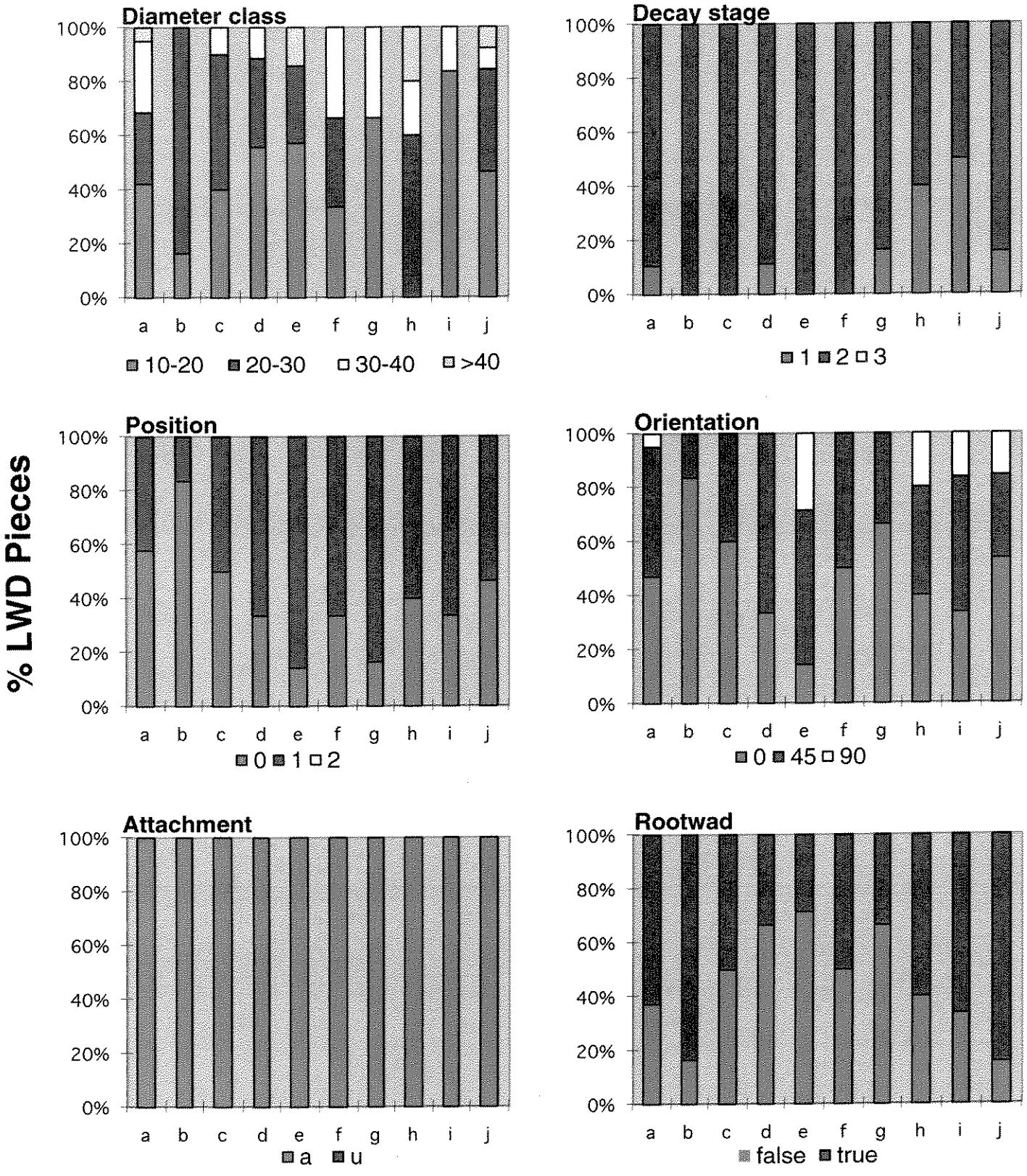


## Whale Creek Reach B

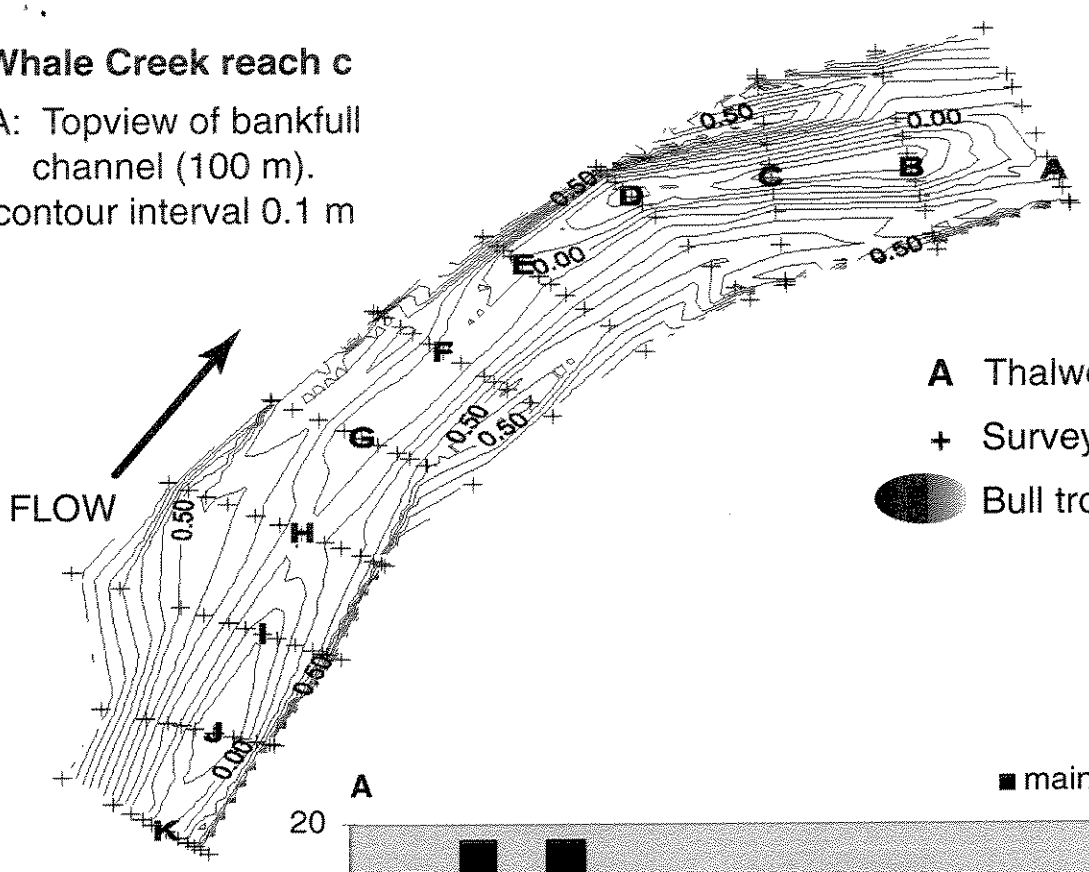



% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

**Whale Creek reach c**

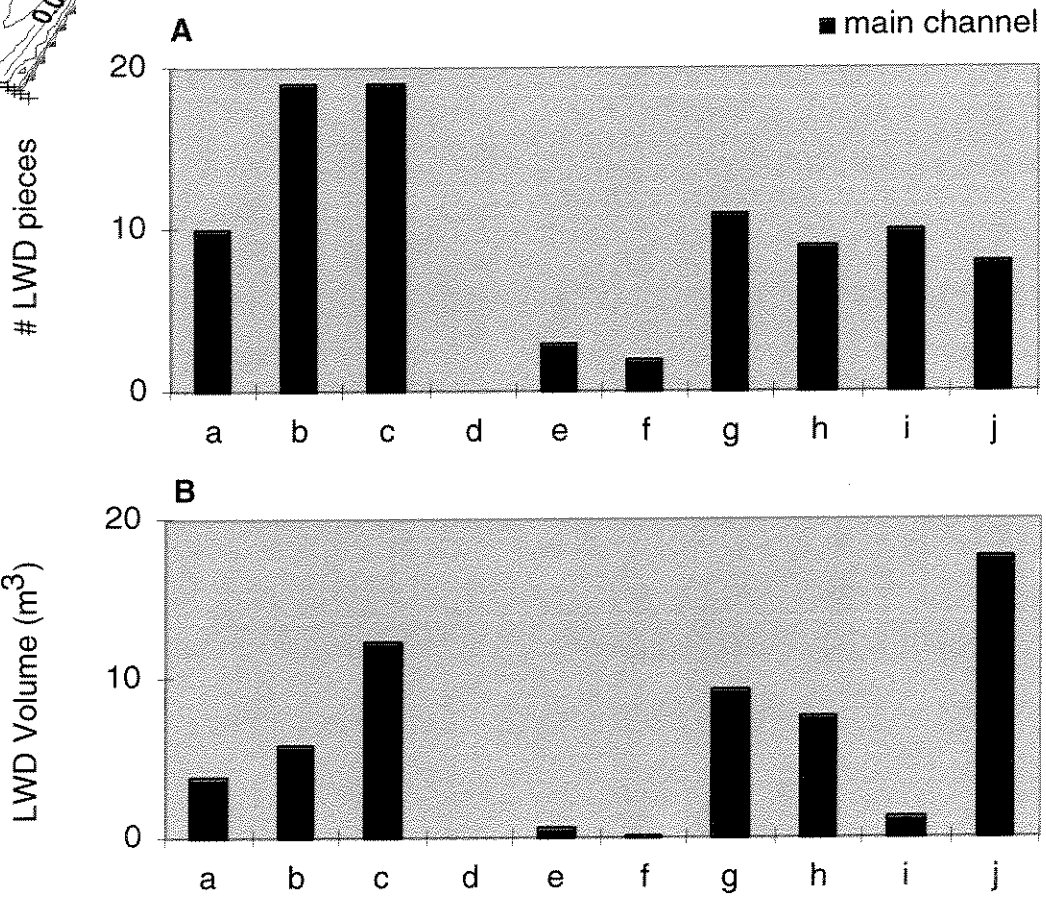
A: Topview of bankfull channel (100 m). contour interval 0.1 m



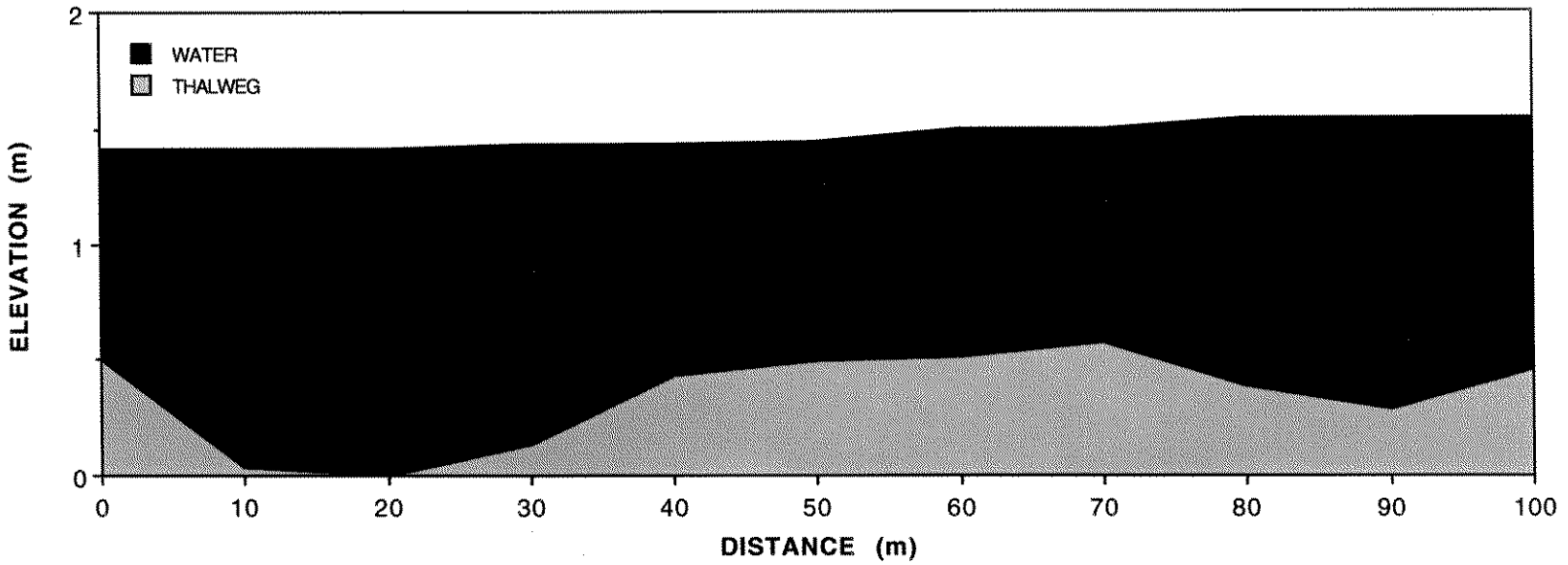

A Thalweg location

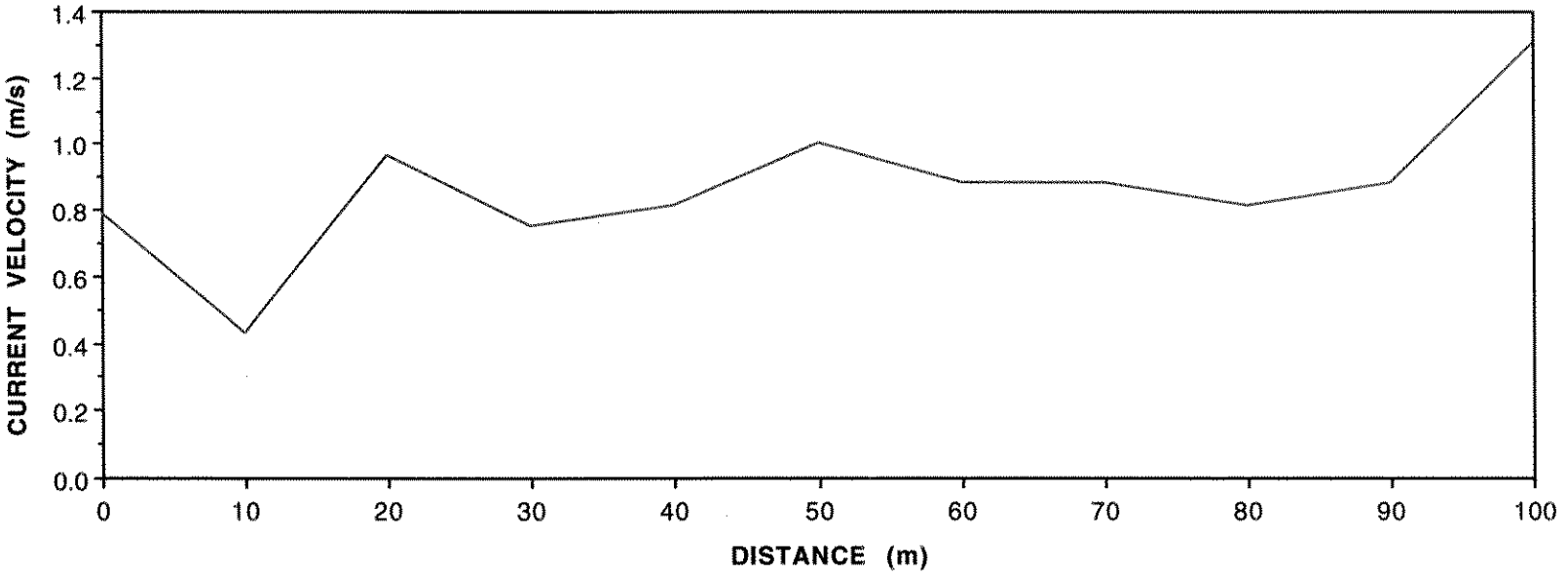
\+ Survey point

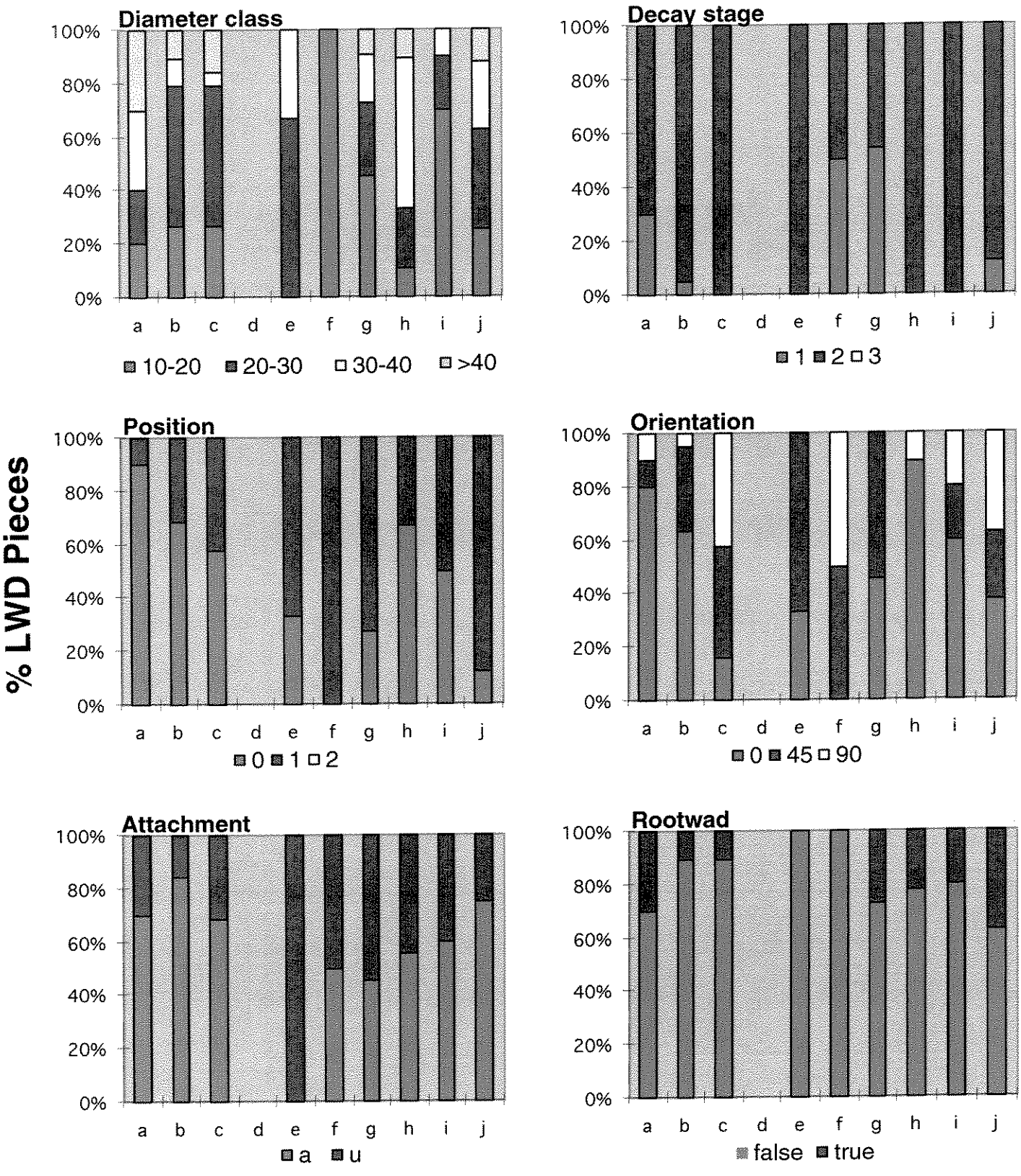
Bull trout redd



## Whale Creek Reach C




% LWD Pieces
Diameter class
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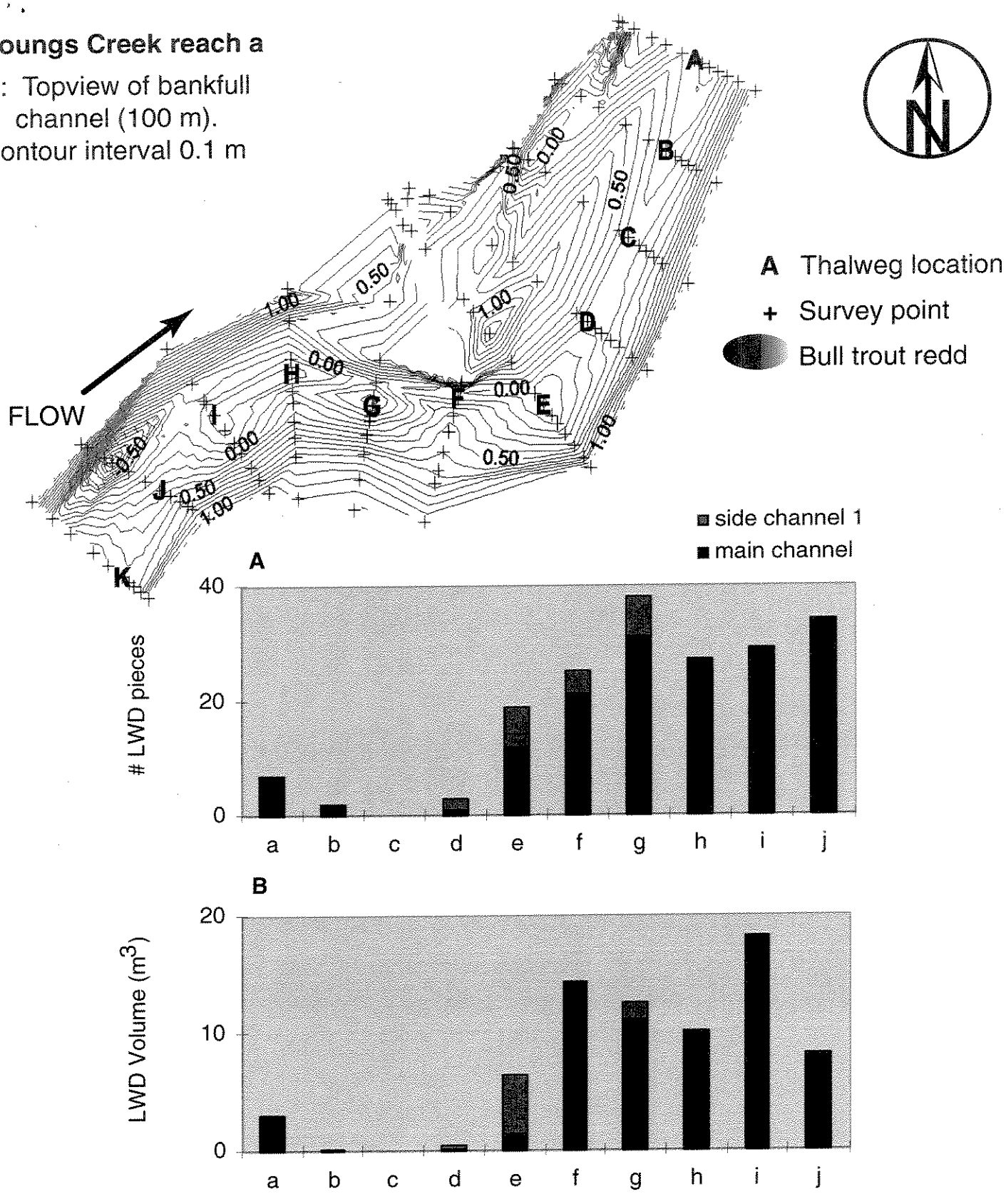
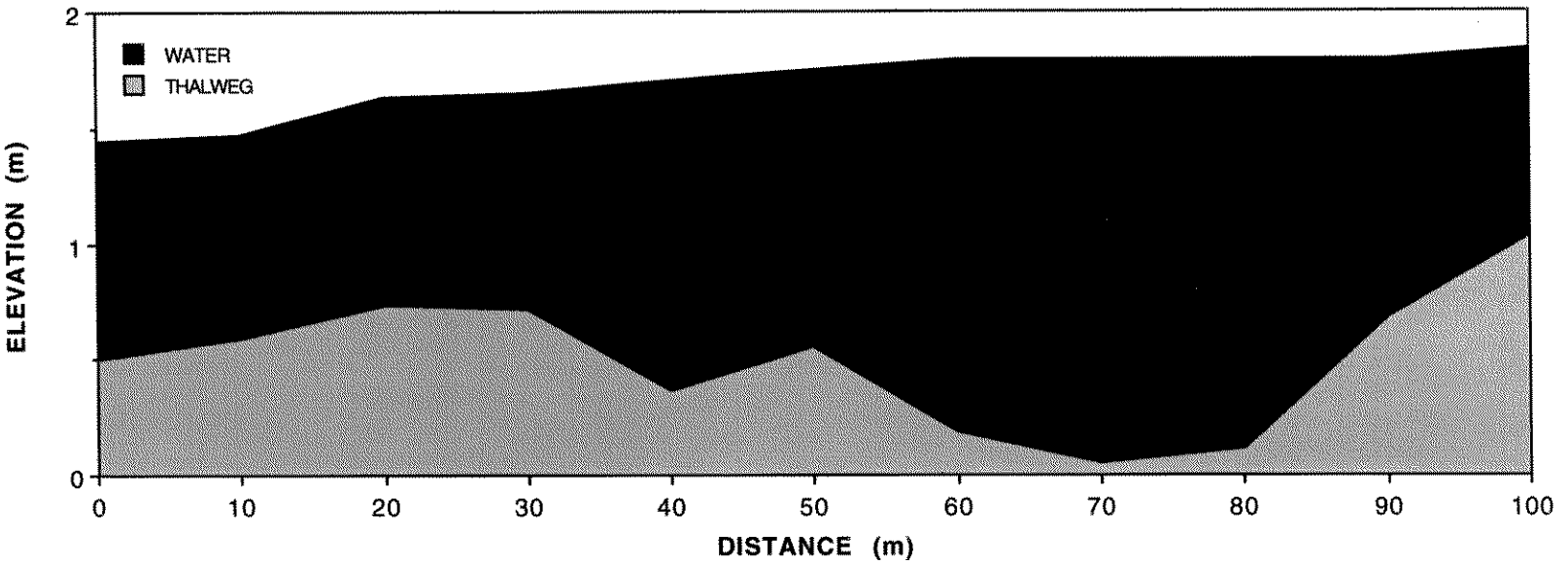
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

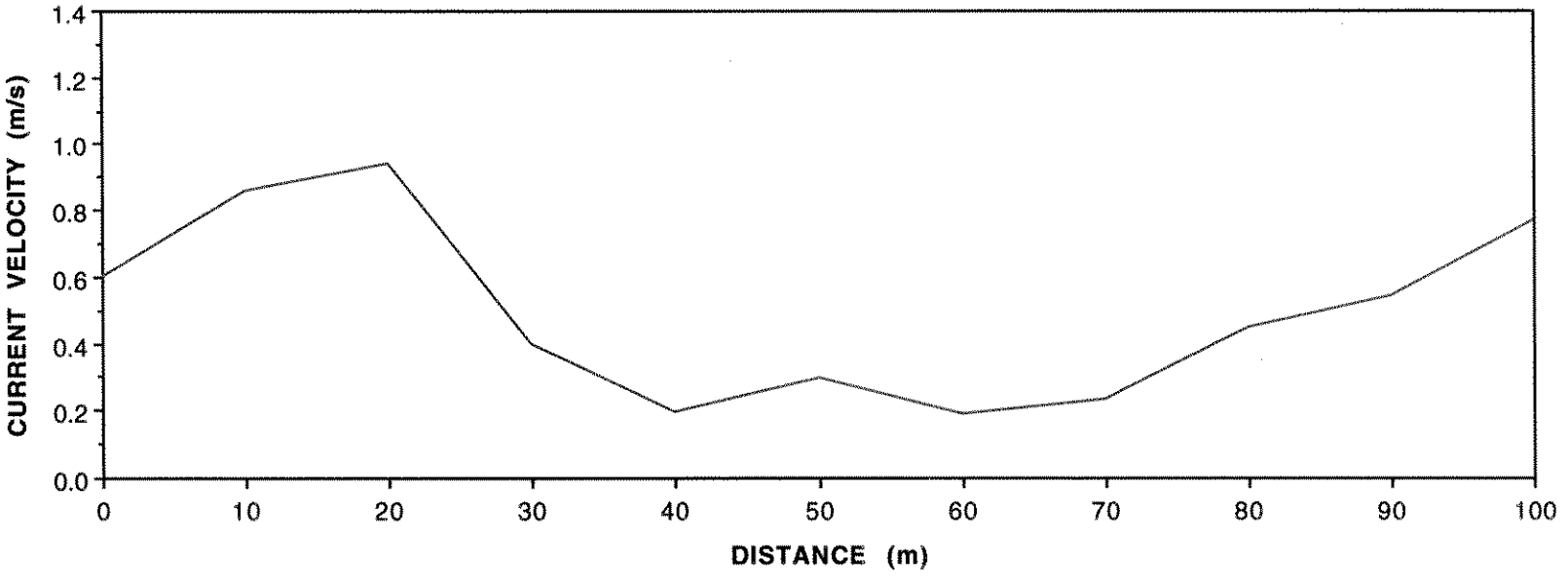
**Youngs Creek reach a**

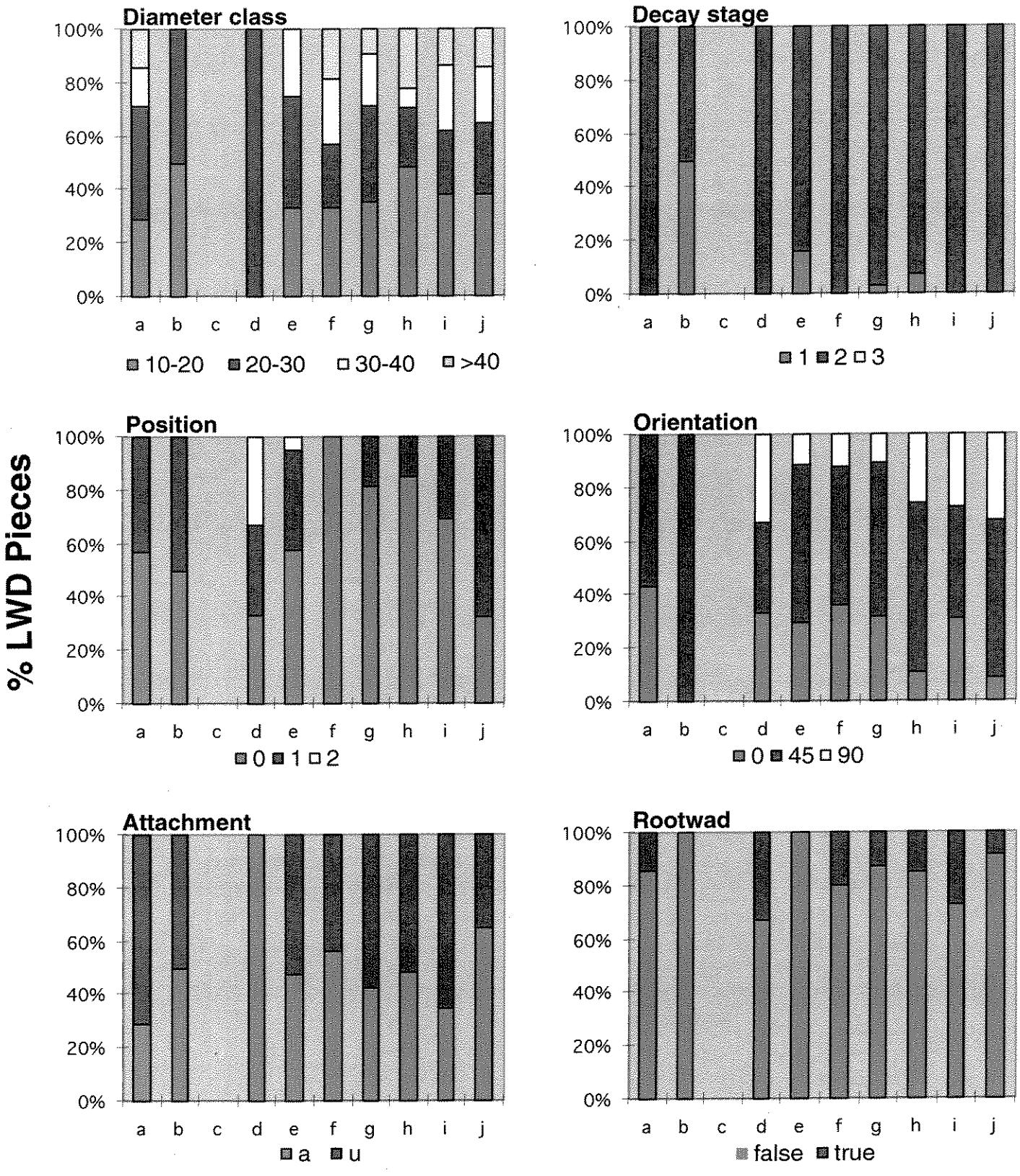
A: Topview of bankfull channel (100 m). contour interval 0.1 m



## Youngs Creek Reach A

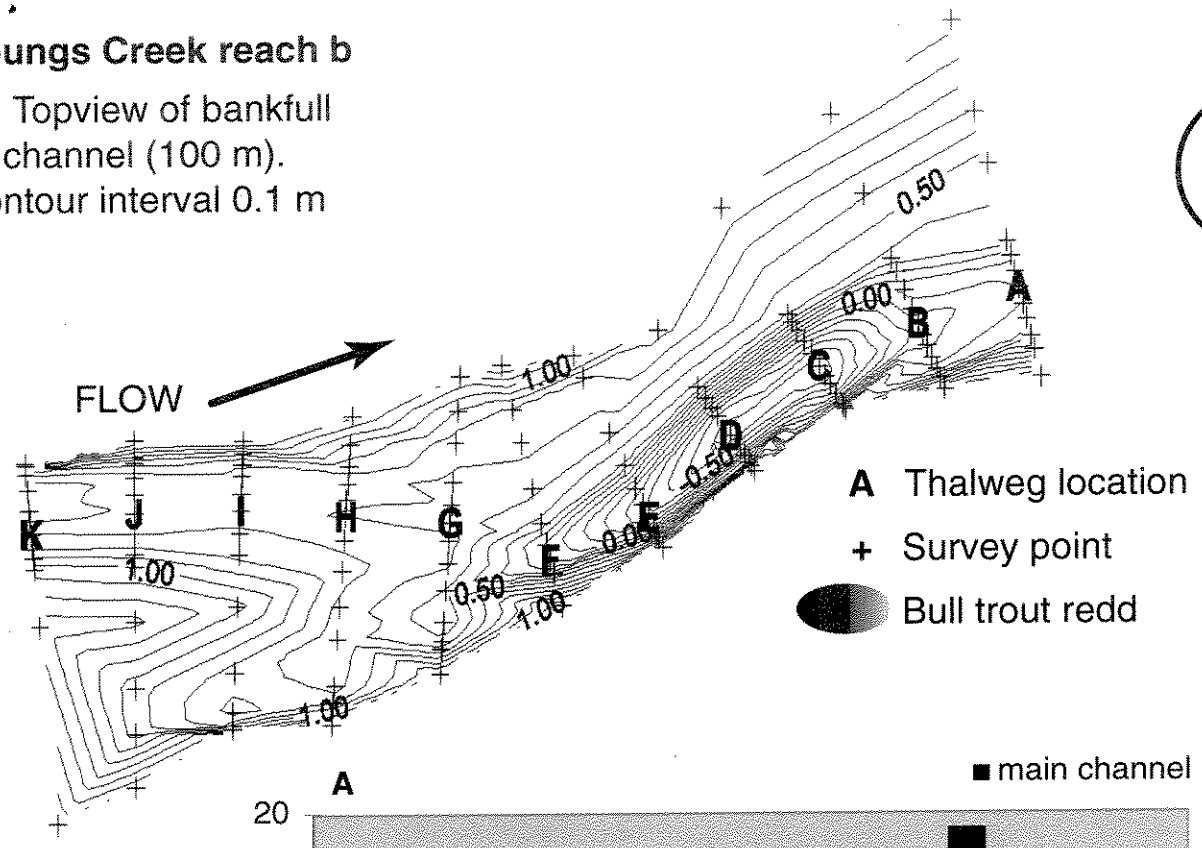


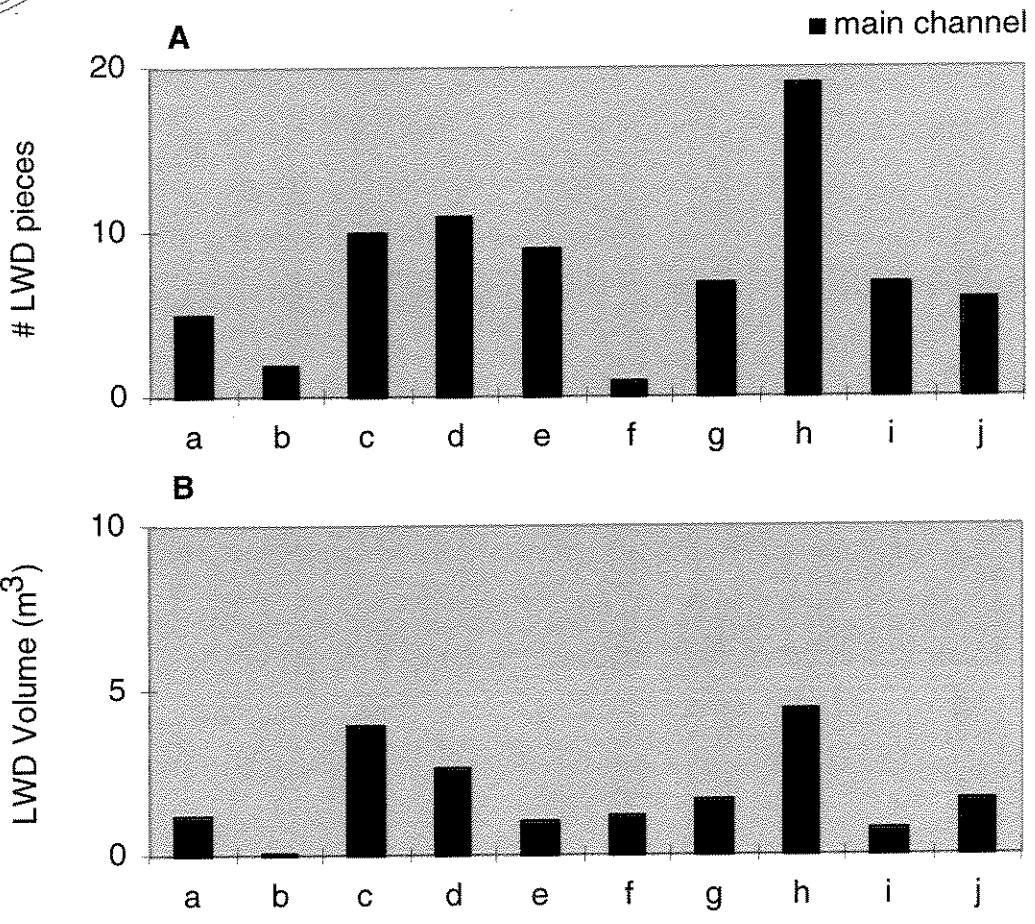




% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

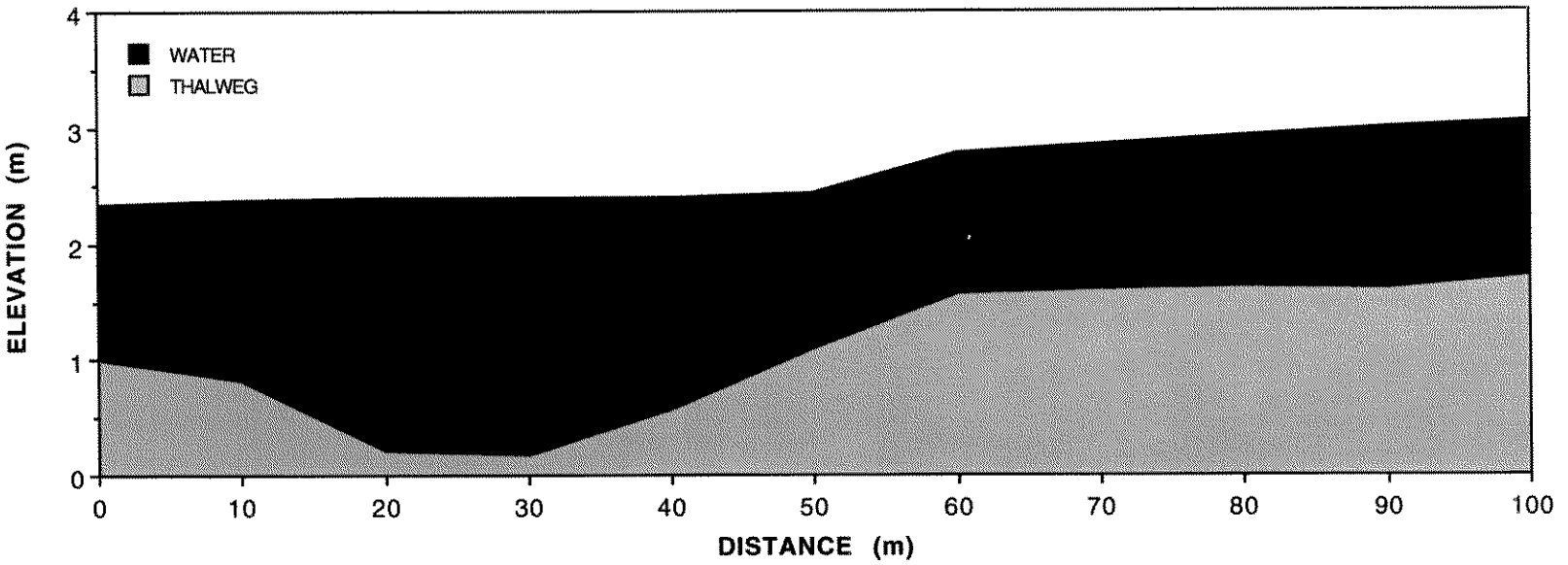
**Youngs Creek reach b**

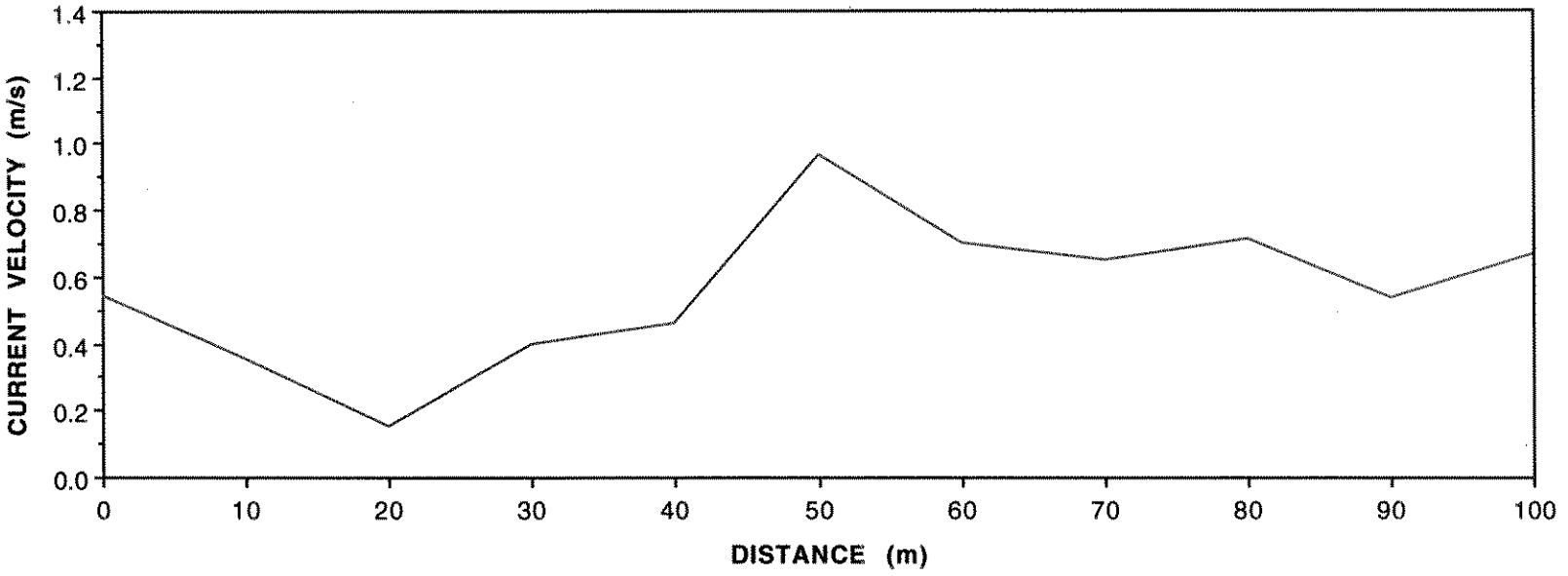
A: Topview of bankfull channel (100 m). contour interval 0.1 m

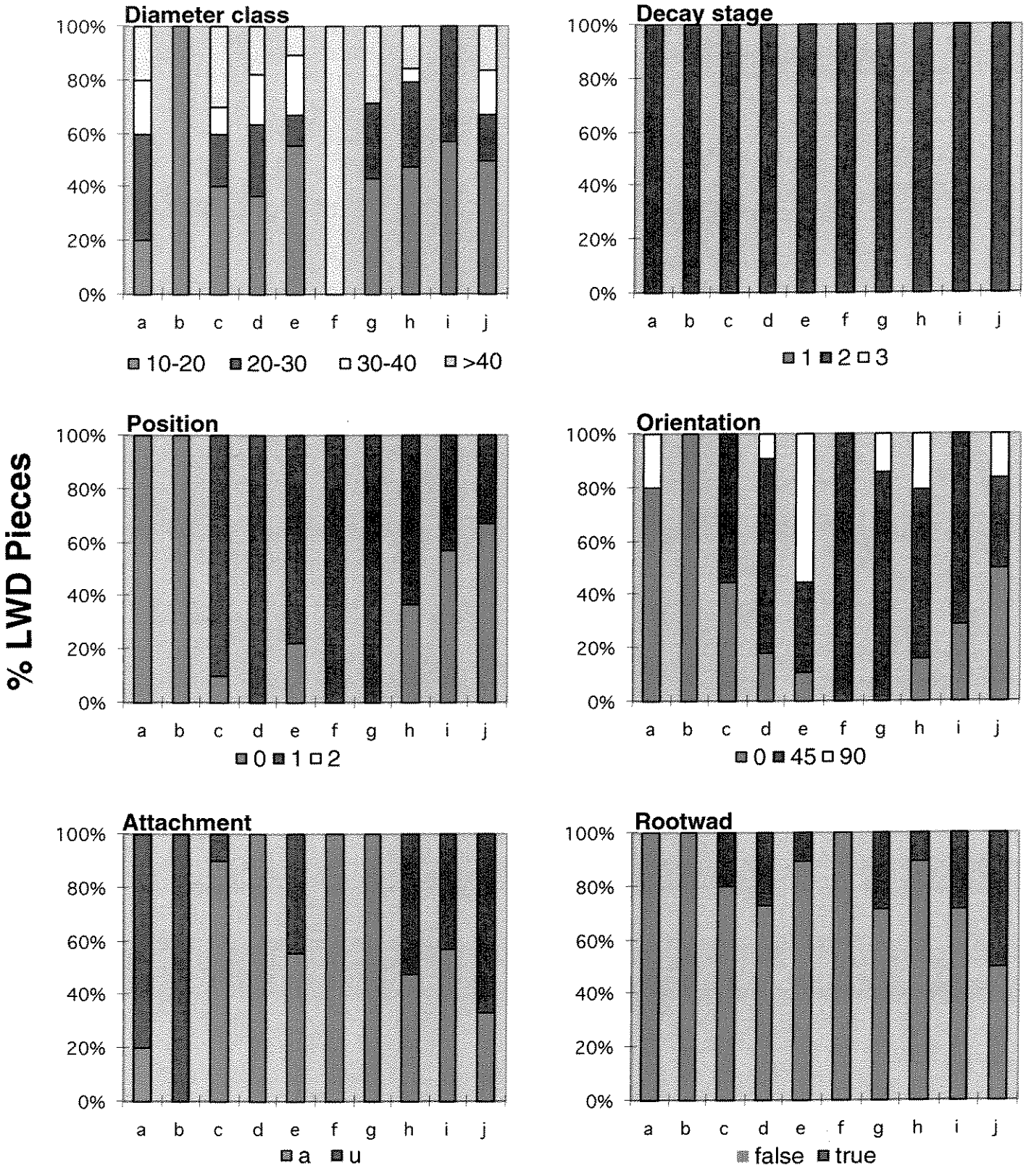


## Youngs Creek Reach B

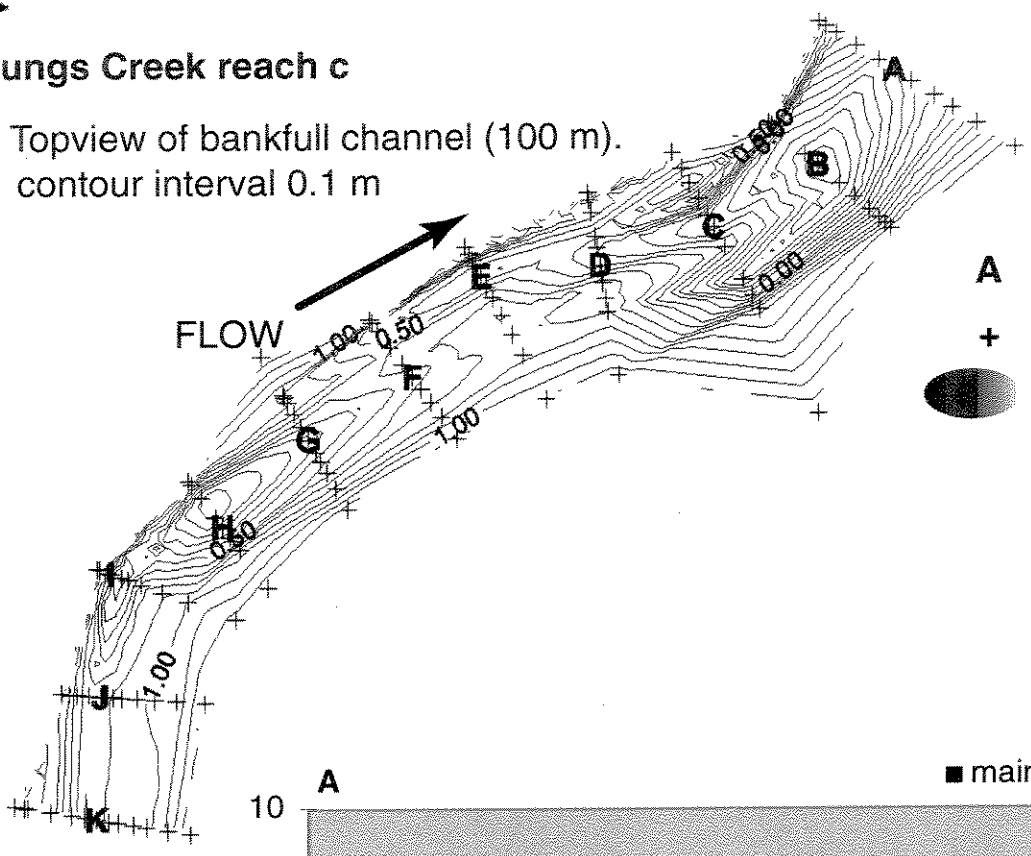


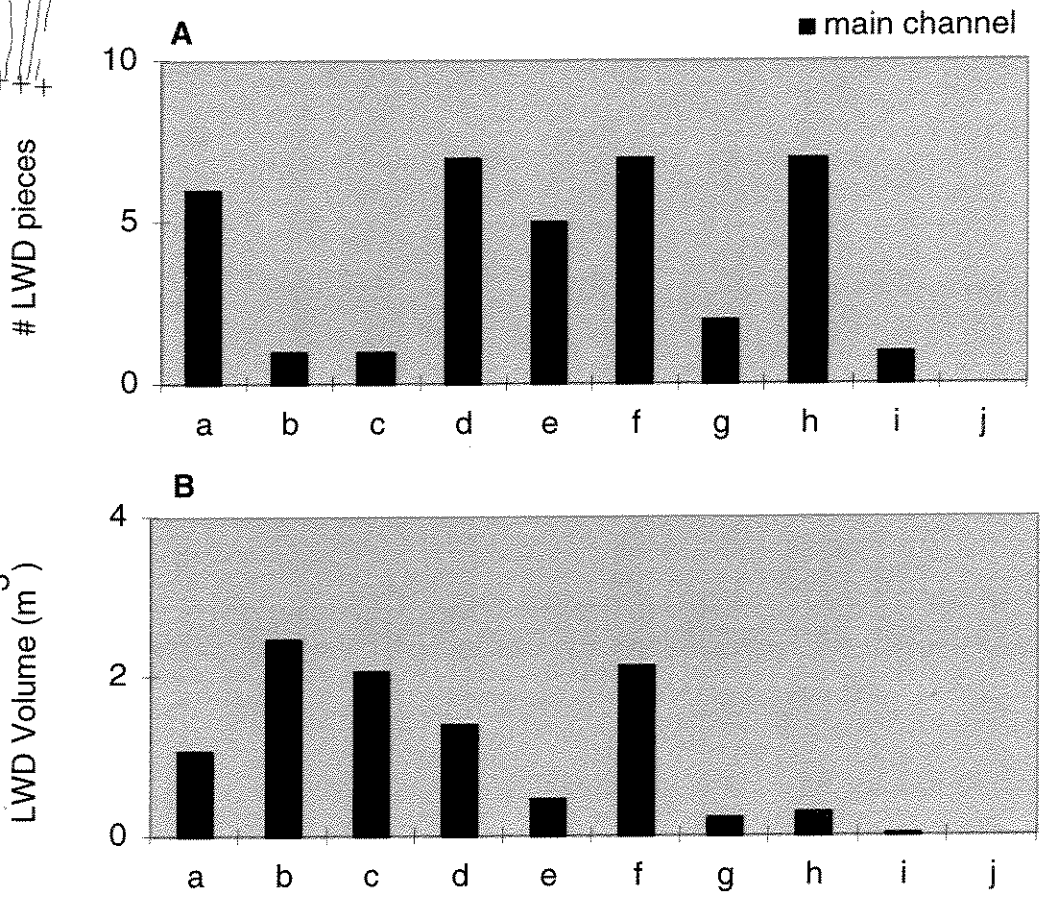




% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

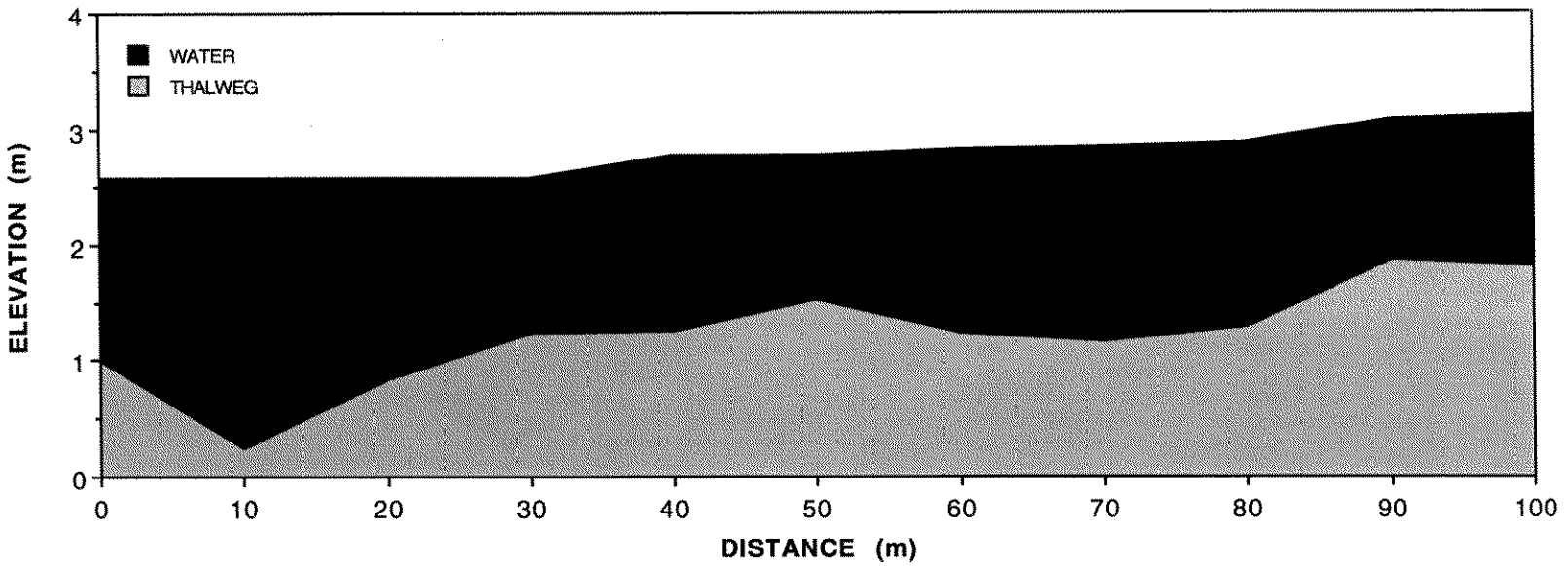
**Youngs Creek reach c**

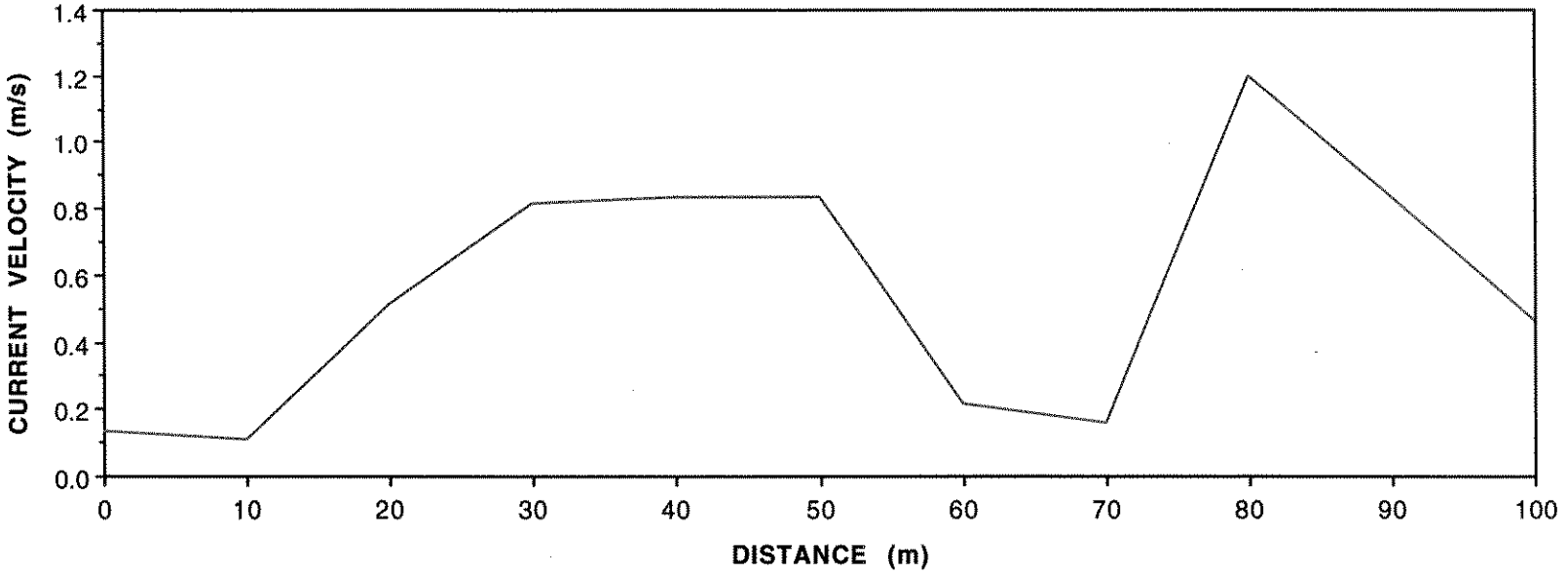
A: Topview of bankfull channel (100 m).
contour interval 0.1 m

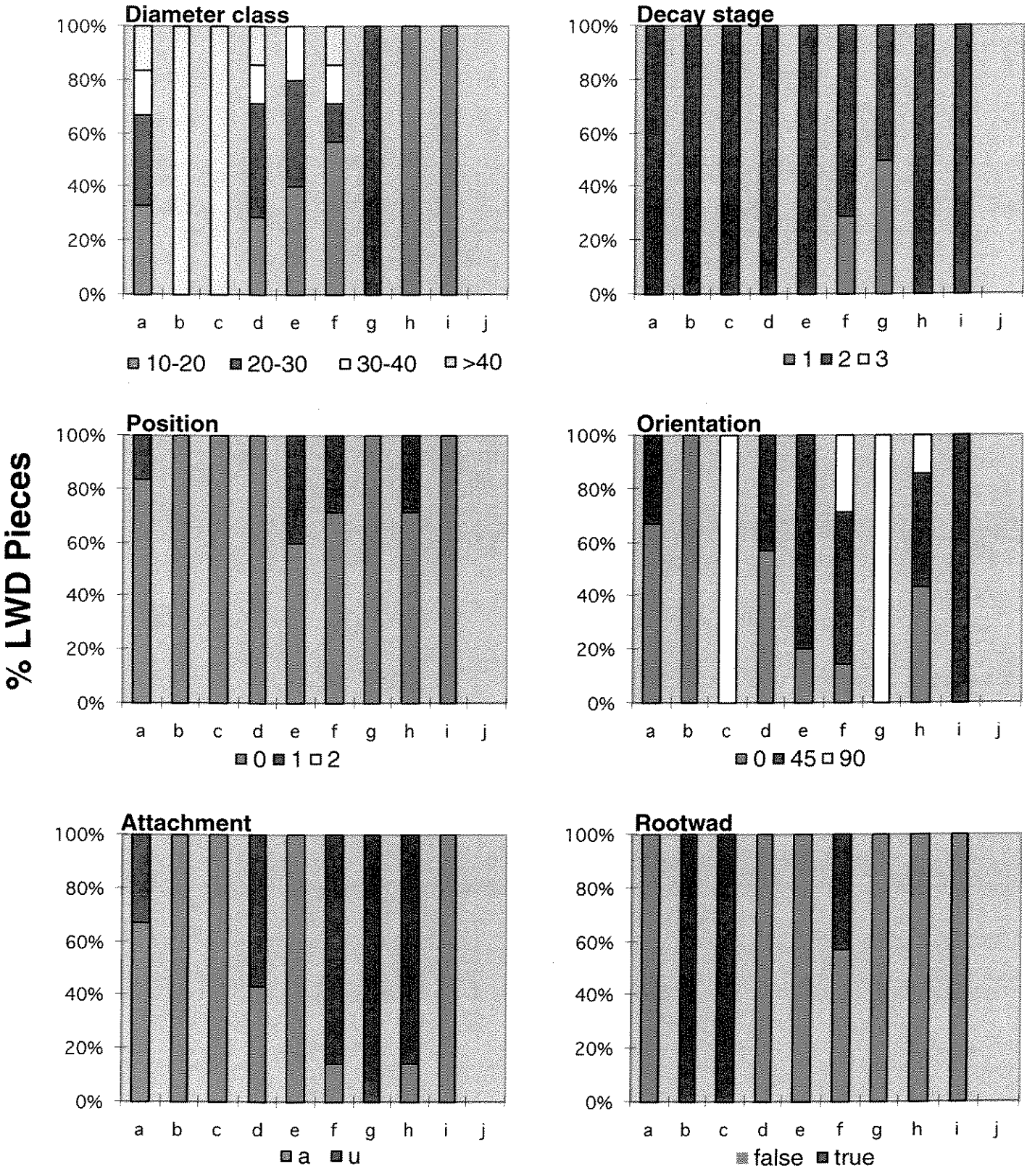


## Youngs Creek Reach C




% LWD Pieces
Diameter class
100%
80%
60%
40%
20%
0%
a b c d e f g h i j
10-20 20-30 30-40 >40
Decay stage
1 2 3
Position
0 1 2
Orientation
0 45 90
Attachment
a u
Rootwad
false true

F-C-31

# APPENDIX B

# LARGE WOODY DEBRIS IN BULL TROUT SPAWNING STREAMS IN NORTHWEST MONTANA

F. Richard Hauer

John T. Gangemi

and

Colden V. Baxter

Flathead Lake Biological Station

The University of Montana

311 BioStation Lane

Polson, MT 59860

| CROSS_ID | Cross_4 | basin area | SC_ID | AGG_ID | LWD_ID | LWD_NO | LWD_D1 (m) | LWD_D2 (m) | Max_Diameter | LWD_LENGTH | area_1 (m2) | area_2 (m2) | LWD_VOL (m | ROOTWAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| co1ac | co1a | 29920 | 0 | 0 | 3 | 3 | 0.1500 | 0.1800 | 18 | 5.60 | 0.017671 | 0.025447 | 0.1207313 | FALSE |
| co1ac | co1a | 29920 | 0 | 0 | 1 | 1 | 0.1100 | 0.1500 | 15 | 2.60 | 0.009503 | 0.017671 | 0.0353272 | FALSE |
| co1ac | co1a | 29920 | 0 | 0 | 2 | 2 | 0.2300 | 0.2300 | 23 | 3.40 | 0.041548 | 0.041548 | 0.1412616 | FALSE |
| co1ac | co1a | 29920 | 0 | 0 | 4 | 4 | 0.7900 | 0.3800 | 79 | 9.30 | 0.490167 | 0.113411 | 2.8066376 | FALSE |
| co1ad | co1a | 29920 | 0 | 0 | 5 | 9 | 0.1500 | 0.1400 | 15 | 3.00 | 0.017671 | 0.015394 | 0.0495979 | FALSE |
| co1ad | co1a | 29920 | 0 | 0 | 2 | 6 | 0.2800 | 0.2300 | 28 | 7.00 | 0.061575 | 0.041548 | 0.3609294 | FALSE |
| co1ad | co1a | 29920 | 0 | 0 | 3 | 7 | 0.2500 | 0.1900 | 25 | 5.50 | 0.049087 | 0.028353 | 0.2129605 | FALSE |
| co1ad | co1a | 29920 | 0 | 0 | 1 | 5 | 0.2200 | 0.1400 | 22 | 13.50 | 0.038013 | 0.015394 | 0.3604975 | FALSE |
| co1ad | co1a | 29920 | 0 | 0 | 4 | 8 | 0.4100 | 0.3100 | 41 | 3.40 | 0.132025 | 0.075477 | 0.3527534 | FALSE |
| co1af | co1a | 29920 | 0 | 0 | 1 | 10 | 0.3300 | 0.2750 | 33 | 3.50 | 0.085530 | 0.059396 | 0.2536196 | FALSE |
| co1ag | co1a | 29920 | 0 | 0 | 1 | 11 | 0.3000 | 0.0450 | 30 | 17.50 | 0.070686 | 0.001590 | 0.6324168 | FALSE |
| co1ah | co1a | 29920 | 0 | 0 | 1 | 12 | 0.0500 | 0.2100 | 21 | 11.40 | 0.001963 | 0.034636 | 0.2086173 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 35 | 46 | 0.1980 | 0.1960 | 20 | 3.40 | 0.030791 | 0.030172 | 0.1036363 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 40 | 51 | 0.1950 | 0.1830 | 20 | 3.60 | 0.029865 | 0.026302 | 0.1011005 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 28 | 39 | 0.1810 | 0.1610 | 18 | 3.10 | 0.025730 | 0.020358 | 0.0714375 | FALSE |
| co1ah | co1a | 29920 | 1 | 0 | 6 | 17 | 0.0520 | 0.1800 | 18 | 7.20 | 0.002124 | 0.025447 | 0.0992541 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 13 | 24 | 0.1150 | 0.1800 | 18 | 3.00 | 0.010387 | 0.025447 | 0.0537506 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 30 | 41 | 0.1520 | 0.1730 | 17 | 3.90 | 0.018146 | 0.023506 | 0.0812214 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 29 | 40 | 0.1710 | 0.0900 | 17 | 3.30 | 0.022966 | 0.006362 | 0.0483904 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 34 | 45 | 0.1610 | 0.1510 | 16 | 2.40 | 0.020358 | 0.017908 | 0.0459194 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 38 | 49 | 0.1600 | 0.1380 | 16 | 1.20 | 0.020106 | 0.014957 | 0.0210380 | FALSE |
| co1ah | co1a | 29920 | 1 | 0 | 2 | 13 | 0.1470 | 0.0700 | 15 | 5.40 | 0.016972 | 0.003848 | 0.0562143 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 24 | 35 | 0.1400 | 0.1460 | 15 | 5.10 | 0.015394 | 0.016742 | 0.0819451 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 11 | 22 | 0.1110 | 0.1430 | 14 | 4.50 | 0.009677 | 0.016061 | 0.0579093 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 12 | 23 | 0.1350 | 0.0470 | 14 | 5.70 | 0.014314 | 0.001735 | 0.0457391 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 26 | 37 | 0.0800 | 0.1290 | 13 | 2.40 | 0.005027 | 0.013070 | 0.0217156 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 33 | 44 | 0.1260 | 0.1260 | 13 | 2.80 | 0.012469 | 0.012469 | 0.0349131 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 39 | 50 | 0.0840 | 0.1250 | 13 | 2.20 | 0.005542 | 0.012272 | 0.0195950 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 27 | 38 | 0.1020 | 0.1020 | 10 | 3.30 | 0.008171 | 0.008171 | 0.0269652 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 32 | 43 | 0.2950 | 0.0920 | 30 | 21.70 | 0.068349 | 0.006648 | 0.8137155 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 8 | 19 | 0.0500 | 0.2930 | 29 | 17.70 | 0.001963 | 0.067426 | 0.6140934 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 20 | 31 | 0.1300 | 0.2810 | 28 | 14.50 | 0.013273 | 0.062016 | 0.5458452 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 31 | 42 | 0.2700 | 0.2750 | 28 | 2.00 | 0.057255 | 0.059396 | 0.1166512 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 23 | 34 | 0.2650 | 0.0910 | 27 | 10.40 | 0.055155 | 0.006504 | 0.3206238 | FALSE |
| co1ah | co1a | 29920 | 1 | 0 | 5 | 16 | 0.2520 | 0.1900 | 25 | 3.40 | 0.049876 | 0.028353 | 0.1329888 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 21 | 32 | 0.2210 | 0.2500 | 25 | 6.50 | 0.038360 | 0.049087 | 0.2842026 | FALSE |
| co1ah | co1a | 29920 | 1 | 0 | 3 | 14 | 0.1600 | 0.2470 | 25 | 1.80 | 0.020106 | 0.047916 | 0.0612202 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 22 | 33 | 0.2350 | 0.1630 | 24 | 7.30 | 0.043374 | 0.020867 | 0.2344789 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 36 | 47 | 0.1280 | 0.2200 | 22 | 6.60 | 0.012868 | 0.038013 | 0.1679079 | FALSE |
| co1ah | co1a | 29920 | 1 | 0 | 4 | 15 | 0.1450 | 0.2130 | 21 | 2.70 | 0.016513 | 0.035633 | 0.0703967 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 25 | 36 | 0.2130 | 0.2030 | 21 | 5.00 | 0.035633 | 0.032365 | 0.1699954 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 9 | 20 | 0.1330 | 0.2120 | 21 | 5.50 | 0.013893 | 0.035299 | 0.1352775 | FALSE |
| co1ah | co1a | 29920 | 1 | 0 | 17 | 28 | 0.1100 | 0.2040 | 20 | 3.50 | 0.009503 | 0.032685 | 0.0738297 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 37 | 48 | 0.1620 | 0.2010 | 20 | 4.50 | 0.020612 | 0.031731 | 0.1177713 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 14 | 25 | 0.1280 | 0.2000 | 20 | 7.90 | 0.012868 | 0.031416 | 0.1749212 | FALSE |
| co1ah | co1a | 29920 | 1 | 2 | 18 | 29 | 0.1500 | 0.3400 | 34 | 14.50 | 0.017671 | 0.090792 | 0.7863596 | FALSE |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| co1ah | co1a | 29920 | 1 | 0 | 7 | 18 | 0.2970 | 0.3300 | 33 | 6.00 | 0.069279 | 0.085530 | 0.4644267 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 10 | 21 | 0.3300 | 0.2220 | 33 | 11.60 | 0.085530 | 0.038708 | 0.7205764 | FALSE |
| co1ah | co1a | 29920 | 1 | 1 | 16 | 27 | 1.0000 | 0.4280 | 100 | 1.20 | 0.785398 | 0.143872 | 0.5575619 | TRUE |
| co1ah | co1a | 29920 | 1 | 1 | 15 | 26 | 0.1200 | 0.5290 | 53 | 1.10 | 0.011310 | 0.219786 | 0.1271029 | TRUE |
| co1ah | co1a | 29920 | 1 | 2 | 19 | 30 | 0.0800 | 0.4520 | 45 | 13.60 | 0.005027 | 0.160460 | 1.1253075 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 5 | 56 | 0.1900 | 0.1400 | 19 | 3.10 | 0.028353 | 0.015394 | 0.0678073 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 26 | 77 | 0.1700 | 0.1900 | 19 | 2.50 | 0.022698 | 0.028353 | 0.0638135 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 8 | 59 | 0.1800 | 0.1200 | 18 | 4.70 | 0.025447 | 0.011310 | 0.0863780 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 11 | 62 | 0.1700 | 0.1450 | 17 | 2.10 | 0.022698 | 0.016513 | 0.0411715 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 21 | 72 | 0.1700 | 0.1700 | 17 | 4.00 | 0.022698 | 0.022698 | 0.0907920 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 24 | 75 | 0.1700 | 0.1700 | 17 | 3.80 | 0.022698 | 0.022698 | 0.0862524 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 17 | 68 | 0.1600 | 0.1400 | 16 | 11.60 | 0.020106 | 0.015394 | 0.2058998 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 15 | 66 | 0.1500 | 0.1200 | 15 | 9.60 | 0.017671 | 0.011310 | 0.1391096 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 19 | 70 | 0.1500 | 0.1200 | 15 | 3.10 | 0.017671 | 0.011310 | 0.0449208 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 27 | 78 | 0.1500 | 0.1500 | 15 | 6.50 | 0.017671 | 0.017671 | 0.1148644 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 12 | 63 | 0.1400 | 0.1200 | 14 | 4.90 | 0.015394 | 0.011310 | 0.0654236 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 9 | 60 | 0.1000 | 0.1200 | 12 | 4.90 | 0.007854 | 0.011310 | 0.0469511 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 13 | 64 | 0.1200 | 0.0800 | 12 | 4.50 | 0.011310 | 0.005027 | 0.0367566 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 14 | 65 | 0.1000 | 0.1000 | 10 | 2.80 | 0.007854 | 0.007854 | 0.0219911 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 6 | 57 | 0.2900 | 0.2100 | 29 | 21.90 | 0.066052 | 0.034636 | 1.1025332 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 22 | 73 | 0.2700 | 0.2000 | 27 | 2.60 | 0.057255 | 0.031416 | 0.1152728 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 16 | 67 | 0.2000 | 0.2600 | 26 | 8.20 | 0.031416 | 0.053093 | 0.3464860 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 18 | 69 | 0.2100 | 0.2600 | 26 | 4.90 | 0.034636 | 0.053093 | 0.2149358 | FALSE |
| co1ai | co1a | 29920 | 1 | 2 | 1 | 52 | 0.1700 | 0.2500 | 25 | 6.00 | 0.022698 | 0.049087 | 0.2153560 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 20 | 71 | 0.2500 | 0.2400 | 25 | 6.10 | 0.049087 | 0.045239 | 0.2876950 | FALSE |
| co1ai | co1a | 29920 | 1 | 2 | 2 | 53 | 0.1800 | 0.2200 | 22 | 12.60 | 0.025447 | 0.038013 | 0.3997987 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 25 | 76 | 0.2200 | 0.1800 | 22 | 6.10 | 0.038013 | 0.025447 | 0.1935534 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 3 | 54 | 0.2000 | 0.2000 | 20 | 3.50 | 0.031416 | 0.031416 | 0.1099557 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 4 | 55 | 0.2000 | 0.1800 | 20 | 2.10 | 0.031416 | 0.025447 | 0.0597059 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 23 | 74 | 0.2900 | 0.3600 | 36 | 8.40 | 0.066052 | 0.101788 | 0.7049257 | FALSE |
| co1ai | co1a | 29920 | 1 | 0 | 7 | 58 | 0.3500 | 0.2500 | 35 | 5.30 | 0.096211 | 0.049087 | 0.3850411 | FALSE |
| co1ai | co1a | 29920 | 1 | 3 | 10 | 61 | 0.6800 | 0.1900 | 68 | 0.85 | 0.363168 | 0.028353 | 0.1663963 | TRUE |
| co1aj | co1a | 29920 | 0 | 0 | 22 | 100 | 0.1900 | 0.1900 | 19 | 8.20 | 0.028353 | 0.028353 | 0.2324934 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 29 | 107 | 0.1100 | 0.1900 | 19 | 11.40 | 0.009503 | 0.028353 | 0.2157801 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 26 | 104 | 0.1800 | 0.1400 | 18 | 5.70 | 0.025447 | 0.015394 | 0.1163959 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 27 | 105 | 0.1000 | 0.1500 | 15 | 9.00 | 0.007854 | 0.017671 | 0.1148644 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 23 | 101 | 0.1400 | 0.1400 | 14 | 12.10 | 0.015394 | 0.015394 | 0.1862649 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 30 | 108 | 0.1300 | 0.1000 | 13 | 5.00 | 0.013273 | 0.007854 | 0.0528180 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 24 | 102 | 0.1000 | 0.1300 | 13 | 9.70 | 0.007854 | 0.013273 | 0.1024669 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 32 | 110 | 0.1200 | 0.1200 | 12 | 3.20 | 0.011310 | 0.011310 | 0.0361911 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 20 | 98 | 0.2400 | 0.2400 | 24 | 9.00 | 0.045239 | 0.045239 | 0.4071501 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 28 | 106 | 0.2200 | 0.2200 | 22 | 3.50 | 0.038013 | 0.038013 | 0.1330463 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 21 | 99 | 0.2200 | 0.2000 | 22 | 9.00 | 0.038013 | 0.031416 | 0.3124311 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 25 | 103 | 0.4200 | 0.4200 | 42 | 6.50 | 0.138544 | 0.138544 | 0.9005368 | FALSE |
| co1aj | co1a | 29920 | 0 | 0 | 31 | 109 | 0.4100 | 0.4100 | 41 | 4.90 | 0.132025 | 0.132025 | 0.6469241 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 5 | 83 | 0.1900 | 0.1900 | 19 | 3.60 | 0.028353 | 0.028353 | 0.1020703 | FALSE |
| co1aj | co1a | 29920 | 1 | 3 | 10 | 88 | 0.1900 | 0.1300 | 19 | 15.60 | 0.028353 | 0.013273 | 0.3246833 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| co1aj | co1a | 29920 | 1 | 4 | 34 | 112 | 0.1900 | 0.1500 | 19 | 15.90 | 0.028353 | 0.017671 | 0.3658931 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 2 | 80 | 0.1800 | 0.1400 | 18 | 16.10 | 0.025447 | 0.015394 | 0.3287674 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 4 | 82 | 0.1600 | 0.1400 | 16 | 3.10 | 0.020106 | 0.015394 | 0.0550249 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 9 | 87 | 0.1600 | 0.1000 | 16 | 17.50 | 0.020106 | 0.007854 | 0.2446513 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 18 | 96 | 0.1500 | 0.1500 | 15 | 12.40 | 0.017671 | 0.017671 | 0.2191259 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 45 | 123 | 0.1000 | 0.1500 | 15 | 5.40 | 0.007854 | 0.017671 | 0.0689186 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 8 | 86 | 0.1300 | 0.1000 | 13 | 3.80 | 0.013273 | 0.007854 | 0.0401417 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 17 | 95 | 0.1100 | 0.1300 | 13 | 2.10 | 0.009503 | 0.013273 | 0.0239154 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 3 | 81 | 0.1200 | 0.1000 | 12 | 5.70 | 0.011310 | 0.007854 | 0.0546165 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 6 | 84 | 0.1200 | 0.1200 | 12 | 6.20 | 0.011310 | 0.011310 | 0.0701203 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 7 | 85 | 0.1000 | 0.1200 | 12 | 2.90 | 0.007854 | 0.011310 | 0.0277874 | FALSE |
| co1aj | co1a | 29920 | 1 | 4 | 36 | 114 | 0.1200 | 0.0800 | 12 | 3.90 | 0.011310 | 0.005027 | 0.0318557 | FALSE |
| co1aj | co1a | 29920 | 1 | 3 | 12 | 90 | 0.1000 | 0.1100 | 11 | 10.00 | 0.007854 | 0.009503 | 0.0867864 | FALSE |
| co1aj | co1a | 29920 | 1 | 4 | 37 | 115 | 0.1100 | 0.0600 | 11 | 5.30 | 0.009503 | 0.002827 | 0.0326765 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 43 | 121 | 0.1100 | 0.1100 | 11 | 3.10 | 0.009503 | 0.009503 | 0.0294603 | FALSE |
| co1aj | co1a | 29920 | 1 | 3 | 13 | 91 | 0.1000 | 0.1000 | 10 | 5.10 | 0.007854 | 0.007854 | 0.0400553 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 39 | 117 | 0.2900 | 0.1900 | 29 | 3.90 | 0.066052 | 0.028353 | 0.1840893 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 15 | 93 | 0.2700 | 0.2700 | 27 | 3.40 | 0.057255 | 0.057255 | 0.1946686 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 41 | 119 | 0.2500 | 0.2500 | 25 | 2.30 | 0.049087 | 0.049087 | 0.1129009 | FALSE |
| co1aj | co1a | 29920 | 1 | 4 | 33 | 111 | 0.2200 | 0.2400 | 24 | 4.80 | 0.038013 | 0.045239 | 0.1998051 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 16 | 94 | 0.2300 | 0.2300 | 23 | 6.30 | 0.041548 | 0.041548 | 0.2617494 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 1 | 79 | 0.1600 | 0.2200 | 22 | 14.90 | 0.020106 | 0.038013 | 0.4329896 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 19 | 97 | 0.2100 | 0.1600 | 21 | 14.60 | 0.034636 | 0.020106 | 0.3996181 | FALSE |
| co1aj | co1a | 29920 | 1 | 3 | 11 | 89 | 0.2000 | 0.1000 | 20 | 12.40 | 0.031416 | 0.007854 | 0.2434732 | FALSE |
| co1aj | co1a | 29920 | 1 | 4 | 35 | 113 | 0.2000 | 0.1400 | 20 | 7.10 | 0.031416 | 0.015394 | 0.1661744 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 42 | 120 | 0.3400 | 0.3000 | 34 | 5.00 | 0.090792 | 0.070686 | 0.4036943 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 44 | 122 | 0.1400 | 0.3100 | 31 | 10.20 | 0.015394 | 0.075477 | 0.4634395 | FALSE |
| co1aj | co1a | 29920 | 1 | 3 | 14 | 92 | 0.2100 | 0.3000 | 30 | 12.00 | 0.034636 | 0.070686 | 0.6319308 | FALSE |
| co1aj | co1a | 29920 | 1 | 0 | 40 | 118 | 0.3500 | 1.7500 | 175 | 2.60 | 0.096211 | 2.405280 | 3.2519383 | TRUE |
| co1aj | co1a | 29920 | 1 | 0 | 38 | 116 | 0.3800 | 0.4800 | 48 | 6.80 | 0.113411 | 0.180956 | 1.0008477 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 11 | 11 | 0.1800 | 0.1500 | 18 | 3.30 | 0.025447 | 0.017671 | 0.0711452 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 10 | 10 | 0.1700 | 0.1800 | 18 | 3.10 | 0.022698 | 0.025447 | 0.0746245 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 3 | 3 | 0.1450 | 0.1700 | 17 | 3.10 | 0.016513 | 0.022698 | 0.0607770 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 13 | 13 | 0.1600 | 0.1200 | 16 | 4.20 | 0.020106 | 0.011310 | 0.0659734 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 14 | 14 | 0.1100 | 0.1500 | 15 | 7.10 | 0.009503 | 0.017671 | 0.0964704 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 1 | 1 | 0.2150 | 0.1800 | 22 | 3.80 | 0.036305 | 0.025447 | 0.1173286 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 12 | 12 | 0.2000 | 0.1000 | 20 | 4.50 | 0.031416 | 0.007854 | 0.0883572 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 4 | 4 | 0.3600 | 0.3600 | 36 | 1.20 | 0.101788 | 0.101788 | 0.1221450 | FALSE |
| co1ba | co1b | 29920 | 0 | a | 2 | 2 | 0.4750 | 0.5100 | 51 | 8.70 | 0.177205 | 0.204282 | 1.6594693 | FALSE |
| co1ba | co1b | 29920 | 1 | a | 5 | 5 | 0.1800 | 0.1600 | 18 | 7.70 | 0.025447 | 0.020106 | 0.1753793 | FALSE |
| co1ba | co1b | 29920 | 1 | a | 6 | 6 | 0.1200 | 0.1300 | 13 | 1.80 | 0.011310 | 0.013273 | 0.0221246 | FALSE |
| co1ba | co1b | 29920 | 1 | | 8 | 8 | 0.2200 | 0.2800 | 28 | 9.94 | 0.038013 | 0.061575 | 0.4949544 | FALSE |
| co1ba | co1b | 29920 | 1 | | 9 | 9 | 0.2400 | 0.1900 | 24 | 1.90 | 0.045239 | 0.028353 | 0.0699122 | FALSE |
| co1ba | co1b | 29920 | 1 | | 7 | 7 | 0.3700 | 0.3100 | 37 | 7.80 | 0.107521 | 0.075477 | 0.7136907 | FALSE |
| co1bb | co1b | 29920 | 0 | | 2 | 16 | 0.2800 | 0.3000 | 30 | 4.50 | 0.061575 | 0.070686 | 0.2975871 | FALSE |
| co1bb | co1b | 29920 | 0 | | 1 | 15 | 0.3300 | 0.4700 | 47 | 4.00 | 0.085530 | 0.173494 | 0.5180482 | FALSE |
| co1bc | co1b | 29920 | 0 | | 2 | 18 | 0.1100 | 0.0500 | 11 | 4.00 | 0.009503 | 0.001963 | 0.0229336 | FALSE |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| co1bc | co1b | 29920 | 0 | 3 | 19 | 0.0600 | 0.2400 | 24 | 9.60 | 0.002827 | 0.045239 | 0.2307184 | FALSE |
| co1bc | co1b | 29920 | 0 | 1 | 17 | 0.0500 | 0.2300 | 23 | 8.70 | 0.001963 | 0.041548 | 0.1892729 | FALSE |
| co1bd | co1b | 29920 | 0 | 1 | 20 | 0.0700 | 0.1900 | 19 | 6.30 | 0.003848 | 0.028353 | 0.1014341 | FALSE |
| co1be | co1b | 29920 | 0 | 3 | 23 | 0.1200 | 0.1700 | 17 | 1.30 | 0.011310 | 0.022698 | 0.0221050 | FALSE |
| co1be | co1b | 29920 | 0 | 1 | 21 | 0.2900 | 0.3800 | 38 | 3.30 | 0.066052 | 0.113411 | 0.2961145 | FALSE |
| co1be | co1b | 29920 | 0 | 2 | 22 | 0.3100 | 0.3000 | 31 | 3.40 | 0.075477 | 0.070686 | 0.2484762 | FALSE |
| co1bf | co1b | 29920 | 0 | 1 | 24 | 0.1800 | 0.1900 | 19 | 1.80 | 0.025447 | 0.028353 | 0.0484198 | FALSE |
| co1bf | co1b | 29920 | 0 | 2 | 25 | 0.1600 | 0.1800 | 18 | 3.90 | 0.020106 | 0.025447 | 0.0888285 | FALSE |
| co1bf | co1b | 29920 | 0 | 4 | 27 | 0.1100 | 0.1000 | 11 | 3.70 | 0.009503 | 0.007854 | 0.0321110 | FALSE |
| co1bf | co1b | 29920 | 0 | 3 | 26 | 0.1900 | 0.2000 | 20 | 1.80 | 0.028353 | 0.031416 | 0.0537919 | FALSE |
| co1bg | co1b | 29920 | 0 | 1 | 28 | 2.6000 | 1.0000 | 260 | 1.90 | 5.309287 | 0.785398 | 5.7899504 | TRUE |
| co1bh | co1b | 29920 | 0 | 1 | 29 | 0.1100 | 0.0800 | 11 | 3.10 | 0.009503 | 0.005027 | 0.0225213 | FALSE |
| co1bi | co1b | 29920 | 0 | 1 | 30 | 0.2400 | 0.5900 | 59 | 7.50 | 0.045239 | 0.273397 | 1.1948841 | FALSE |
| co1bj | co1b | 29920 | 0 | 4 | 34 | 0.1400 | 0.1300 | 14 | 3.40 | 0.015394 | 0.013273 | 0.0487339 | FALSE |
| co1bj | co1b | 29920 | 0 | 3 | 33 | 0.1400 | 0.0600 | 14 | 3.50 | 0.015394 | 0.002827 | 0.0318871 | FALSE |
| co1bj | co1b | 29920 | 0 | 6 | 36 | 0.0800 | 0.1400 | 14 | 4.20 | 0.005027 | 0.015394 | 0.0428827 | FALSE |
| co1bj | co1b | 29920 | 0 | 2 | 32 | 0.2000 | 0.2100 | 21 | 2.90 | 0.031416 | 0.034636 | 0.0957753 | FALSE |
| co1bj | co1b | 29920 | 0 | 1 | 31 | 0.5100 | 2.0000 | 200 | 1.80 | 0.204282 | 3.141590 | 3.0112847 | TRUE |
| co1bj | co1b | 29920 | 0 | 5 | 35 | 0.0600 | 1.0000 | 100 | 9.20 | 0.002827 | 0.785398 | 3.6258347 | FALSE |
| go1aa | go1a | 13837 | 0 | 1 | 1 | 0.0700 | 0.1100 | 11 | 5.76 | 0.003848 | 0.009503 | 0.0384531 | FALSE |
| go1ab | go1a | 13837 | 0 | 2 | 2 | 0.2900 | 0.2400 | 29 | 2.50 | 0.066052 | 0.045239 | 0.1391135 | FALSE |
| go1ac | go1a | 13837 | 0 | 3 | 3 | 0.1500 | 0.1800 | 18 | 2.56 | 0.017671 | 0.025447 | 0.0551915 | FALSE |
| go1ae | go1a | 13837 | 0 | 4 | 4 | 0.1500 | 0.1000 | 15 | 5.60 | 0.017671 | 0.007854 | 0.0714712 | FALSE |
| go1af | go1a | 13837 | 0 | 6 | 6 | 0.1100 | 0.2000 | 20 | 2.97 | 0.009503 | 0.031416 | 0.0607650 | FALSE |
| go1af | go1a | 13837 | 0 | 5 | 5 | 0.6400 | 0.6000 | 64 | 0.37 | 0.321699 | 0.282743 | 0.1118218 | TRUE |
| go1ag | go1a | 13837 | 0 | 7 | 7 | 0.1400 | 0.1200 | 14 | 1.50 | 0.015394 | 0.011310 | 0.0200276 | FALSE |
| go1ag | go1a | 13837 | 0 | 8 | 8 | 0.3400 | 0.3400 | 34 | 0.25 | 0.090792 | 0.090792 | 0.0226980 | FALSE |
| go1ah | go1a | 13837 | 0 | 13 | 13 | 0.1200 | 0.0800 | 12 | 2.00 | 0.011310 | 0.005027 | 0.0163363 | FALSE |
| go1ah | go1a | 13837 | 0 | 9 | 9 | 0.2400 | 0.1300 | 24 | 5.31 | 0.045239 | 0.013273 | 0.1553497 | FALSE |
| go1ah | go1a | 13837 | 0 | 11 | 11 | 0.3000 | 0.3800 | 38 | 5.00 | 0.070686 | 0.113411 | 0.4602429 | FALSE |
| go1ah | go1a | 13837 | 0 | 10 | 10 | 0.2400 | 0.3000 | 30 | 2.53 | 0.045239 | 0.070686 | 0.1466447 | FALSE |
| go1ah | go1a | 13837 | 0 | 12 | 12 | 0.4000 | 0.2900 | 40 | 2.96 | 0.125664 | 0.066052 | 0.2837390 | FALSE |
| go1ah | go1a | 13837 | 1 | 15 | 15 | 0.2400 | 0.1500 | 24 | 2.86 | 0.045239 | 0.017671 | 0.0899618 | FALSE |
| go1ah | go1a | 13837 | 1 | 14 | 14 | 3.0500 | 2.3000 | 305 | 1.00 | 7.306160 | 4.154753 | 5.7304565 | TRUE |
| go1ai | go1a | 13837 | 0 | 29 | 29 | 0.1800 | 0.1900 | 19 | 2.10 | 0.025447 | 0.028353 | 0.0564897 | FALSE |
| go1ai | go1a | 13837 | 0 | 24 | 24 | 0.1500 | 0.1400 | 15 | 2.01 | 0.017671 | 0.015394 | 0.0332306 | FALSE |
| go1ai | go1a | 13837 | 0 | 23 | 23 | 0.1100 | 0.1400 | 14 | 3.72 | 0.009503 | 0.015394 | 0.0463086 | FALSE |
| go1ai | go1a | 13837 | 0 | 32 | 32 | 0.1300 | 0.1000 | 13 | 2.40 | 0.013273 | 0.007854 | 0.0253526 | FALSE |
| go1ai | go1a | 13837 | 0 | 31 | 31 | 0.1200 | 0.0600 | 12 | 4.03 | 0.011310 | 0.002827 | 0.0284864 | FALSE |
| go1ai | go1a | 13837 | 0 | 28 | 28 | 0.1000 | 0.1200 | 12 | 2.70 | 0.007854 | 0.011310 | 0.0258710 | FALSE |
| go1ai | go1a | 13837 | 0 | 33 | 33 | 0.2800 | 0.2800 | 28 | 2.59 | 0.061575 | 0.061575 | 0.1594797 | FALSE |
| go1ai | go1a | 13837 | 0 | 27 | 27 | 0.2300 | 0.2600 | 26 | 4.21 | 0.041548 | 0.053093 | 0.1992180 | FALSE |
| go1ai | go1a | 13837 | 0 | 25 | 25 | 0.2500 | 0.2100 | 25 | 4.16 | 0.049087 | 0.034636 | 0.1741446 | FALSE |
| go1ai | go1a | 13837 | 0 | 26 | 26 | 0.1800 | 0.2400 | 24 | 5.77 | 0.025447 | 0.045239 | 0.2039285 | FALSE |
| go1ai | go1a | 13837 | 0 | 30 | 30 | 0.2100 | 0.1800 | 21 | 3.44 | 0.034636 | 0.025447 | 0.1033426 | FALSE |
| go1ai | go1a | 13837 | 0 | 17 | 17 | 0.3800 | 0.2000 | 38 | 2.36 | 0.113411 | 0.031416 | 0.1708962 | TRUE |
| go1ai | go1a | 13837 | 0 | 18 | 18 | 0.2500 | 0.3300 | 33 | 2.06 | 0.049087 | 0.085530 | 0.1386556 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| go1ai | go1a | 13837 | 0 | | 21 | 21 | 0.2600 | 0.3100 | 31 | 5.48 | 0.053093 | 0.075477 | 0.3522806 | FALSE |
| go1ai | go1a | 13837 | 0 | | 20 | 20 | 1.3700 | 0.5500 | 137 | 2.57 | 1.474113 | 0.237583 | 2.1995285 | TRUE |
| go1ai | go1a | 13837 | 0 | | 16 | 16 | 1.0000 | 0.4400 | 100 | 1.60 | 0.785398 | 0.152053 | 0.7499604 | TRUE |
| go1ai | go1a | 13837 | 0 | | 19 | 19 | 0.5000 | 0.5500 | 55 | 2.34 | 0.196349 | 0.237583 | 0.5077006 | TRUE |
| go1ai | go1a | 13837 | 0 | | 22 | 22 | 0.3700 | 0.4600 | 46 | 3.48 | 0.107521 | 0.166190 | 0.4762572 | FALSE |
| go1ai | go1a | 13837 | 1 | | 36 | 36 | 0.1900 | 0.1800 | 19 | 2.61 | 0.028353 | 0.025447 | 0.0702086 | FALSE |
| go1ai | go1a | 13837 | 1 | | 35 | 35 | 0.1800 | 0.1600 | 18 | 1.80 | 0.025447 | 0.020106 | 0.0409977 | FALSE |
| go1ai | go1a | 13837 | 1 | | 39 | 39 | 0.1100 | 0.1200 | 12 | 2.35 | 0.009503 | 0.011310 | 0.0244553 | FALSE |
| go1ai | go1a | 13837 | 1 | | 40 | 40 | 0.2600 | 0.2400 | 26 | 1.10 | 0.053093 | 0.045239 | 0.0540825 | FALSE |
| go1ai | go1a | 13837 | 1 | | 41 | 41 | 0.2600 | 0.2600 | 26 | 1.97 | 0.053093 | 0.053093 | 0.1045930 | FALSE |
| go1ai | go1a | 13837 | 1 | | 42 | 42 | 0.2300 | 0.2600 | 26 | 1.65 | 0.041548 | 0.053093 | 0.0780783 | FALSE |
| go1ai | go1a | 13837 | 1 | | 34 | 34 | 0.2300 | 0.1800 | 23 | 6.90 | 0.041548 | 0.025447 | 0.2311307 | FALSE |
| go1ai | go1a | 13837 | 1 | | 37 | 37 | 0.2000 | 0.2000 | 20 | 2.91 | 0.031416 | 0.031416 | 0.0914203 | FALSE |
| go1ai | go1a | 13837 | 1 | | 38 | 38 | 0.3300 | 0.6600 | 66 | 3.63 | 0.085530 | 0.342119 | 0.7761828 | FALSE |
| go1aj | go1a | 13837 | 0 | | 59 | 59 | 0.1300 | 0.1800 | 18 | 4.98 | 0.013273 | 0.025447 | 0.0964130 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 50 | 50 | 0.1100 | 0.1600 | 16 | 3.51 | 0.009503 | 0.020106 | 0.0519646 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 52 | 52 | 0.1000 | 0.1600 | 16 | 5.51 | 0.007854 | 0.020106 | 0.0770302 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 56 | 56 | 0.1500 | 0.1300 | 15 | 2.79 | 0.017671 | 0.013273 | 0.0431678 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 55 | 55 | 0.1400 | 0.1100 | 14 | 4.16 | 0.015394 | 0.009503 | 0.0517860 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 57 | 57 | 0.0900 | 0.1100 | 11 | 3.26 | 0.006362 | 0.009503 | 0.0258600 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 53 | 53 | 0.2500 | 0.2300 | 25 | 1.90 | 0.049087 | 0.041548 | 0.0861031 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 43 | 43 | 0.2500 | 0.2200 | 25 | 3.94 | 0.049087 | 0.038013 | 0.1715881 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 45 | 45 | 0.2300 | 0.2000 | 23 | 3.09 | 0.041548 | 0.031416 | 0.1127285 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 46 | 46 | 0.2200 | 0.2200 | 22 | 5.21 | 0.038013 | 0.038013 | 0.1980490 | FALSE |
| go1aj | go1a | 13837 | 0 | | 60 | 60 | 0.2100 | 0.2200 | 22 | 3.56 | 0.034636 | 0.038013 | 0.1293157 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 47 | 47 | 0.2000 | 0.2200 | 22 | 1.30 | 0.031416 | 0.038013 | 0.0451289 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 49 | 49 | 0.2100 | 0.2100 | 21 | 2.46 | 0.034636 | 0.034636 | 0.0852046 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 48 | 48 | 0.1300 | 0.2100 | 21 | 5.04 | 0.013273 | 0.034636 | 0.1207313 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 51 | 51 | 0.2700 | 0.3000 | 30 | 4.38 | 0.057255 | 0.070686 | 0.2801913 | FALSE |
| go1aj | go1a | 13837 | 0 | a | 54 | 54 | 0.6800 | 0.3800 | 68 | 2.46 | 0.363168 | 0.113411 | 0.5861924 | TRUE |
| go1aj | go1a | 13837 | 0 | a | 58 | 58 | 0.2300 | 0.4500 | 45 | 7.10 | 0.041548 | 0.159043 | 0.7120964 | TRUE |
| go1aj | go1a | 13837 | 0 | a | 44 | 44 | 0.2700 | 0.4000 | 40 | 6.74 | 0.057255 | 0.125664 | 0.6164373 | FALSE |
| go1aj | go1a | 13837 | 1 | | 61 | 61 | 0.1500 | 0.1300 | 15 | 7.68 | 0.017671 | 0.013273 | 0.1188275 | FALSE |
| go1ba | go1b | 13837 | 0 | | 5 | 5 | 0.1500 | 0.1200 | 15 | 1.40 | 0.017671 | 0.011310 | 0.0202868 | FALSE |
| go1ba | go1b | 13837 | 0 | | 6 | 6 | 0.1100 | 0.1300 | 13 | 1.30 | 0.009503 | 0.013273 | 0.0148047 | FALSE |
| go1ba | go1b | 13837 | 0 | | 2 | 2 | 0.2900 | 0.2300 | 29 | 2.70 | 0.066052 | 0.041548 | 0.1452593 | FALSE |
| go1ba | go1b | 13837 | 0 | | 4 | 4 | 0.2800 | 0.2900 | 29 | 2.90 | 0.061575 | 0.066052 | 0.1850593 | FALSE |
| go1ba | go1b | 13837 | 0 | | 1 | 1 | 0.2300 | 0.1600 | 23 | 3.88 | 0.041548 | 0.020106 | 0.1196082 | FALSE |
| go1ba | go1b | 13837 | 0 | | 3 | 3 | 0.4000 | 0.7900 | 79 | 2.58 | 0.125664 | 0.490167 | 0.7944209 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 16 | 16 | 0.1400 | 0.1900 | 19 | 3.29 | 0.015394 | 0.028353 | 0.0719632 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 30 | 30 | 0.1800 | 0.1500 | 18 | 2.15 | 0.025447 | 0.017671 | 0.0463522 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 14 | 14 | 0.1800 | 0.1200 | 18 | 8.44 | 0.025447 | 0.011310 | 0.1551129 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 9 | 9 | 0.1400 | 0.1500 | 15 | 2.10 | 0.015394 | 0.017671 | 0.0347185 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 18 | 18 | 0.1100 | 0.1500 | 15 | 5.06 | 0.009503 | 0.017671 | 0.0687521 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 7 | 7 | 0.1400 | 0.1400 | 14 | 1.73 | 0.015394 | 0.015394 | 0.0266313 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 19 | 19 | 0.1100 | 0.1400 | 14 | 2.21 | 0.009503 | 0.015394 | 0.0275113 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 17 | 17 | 0.1000 | 0.1400 | 14 | 3.83 | 0.007854 | 0.015394 | 0.0445195 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| go1bb | go1b | 13837 | 0 | a | 28 | 28 | 0.0700 | 0.1400 | 14 | 4.81 | 0.003848 | 0.015394 | 0.0462776 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 29 | 29 | 0.1200 | 0.1300 | 13 | 3.73 | 0.011310 | 0.013273 | 0.0458472 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 13 | 13 | 0.0900 | 0.1200 | 12 | 4.41 | 0.006362 | 0.011310 | 0.0389655 | FALSE |
| go1bb | go1b | 13837 | 0 | | 3 | 3 | 0.0900 | 0.1100 | 11 | 4.54 | 0.006362 | 0.009503 | 0.0360136 | FALSE |
| go1bb | go1b | 13837 | 0 | | 2 | 2 | 0.1000 | 0.0700 | 10 | 3.88 | 0.007854 | 0.003848 | 0.0227027 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 24 | 24 | 0.2700 | 0.2600 | 27 | 3.76 | 0.057255 | 0.053093 | 0.2074549 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 27 | 27 | 0.2300 | 0.2700 | 27 | 3.79 | 0.041548 | 0.057255 | 0.1872317 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 15 | 15 | 0.2400 | 0.2600 | 26 | 2.25 | 0.045239 | 0.053093 | 0.1106232 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 10 | 10 | 0.2000 | 0.2600 | 26 | 4.90 | 0.031416 | 0.053093 | 0.2070465 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 32 | 32 | 0.2500 | 0.2500 | 25 | 1.75 | 0.049087 | 0.049087 | 0.0859029 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 6 | 6 | 0.2300 | 0.2500 | 25 | 2.70 | 0.041548 | 0.049087 | 0.1223571 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 11 | 11 | 0.1600 | 0.2400 | 24 | 3.24 | 0.020106 | 0.045239 | 0.1058590 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 12 | 12 | 0.2200 | 0.2200 | 22 | 2.97 | 0.038013 | 0.038013 | 0.1128993 | FALSE |
| go1bb | go1b | 13837 | 0 | | 1 | 1 | 0.1800 | 0.3800 | 38 | 4.47 | 0.025447 | 0.113411 | 0.3103483 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 4 | 4 | 0.3100 | 0.3100 | 31 | 4.15 | 0.075477 | 0.075477 | 0.3132283 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 26 | 26 | 1.6000 | 0.4500 | 160 | 2.14 | 2.010618 | 0.159043 | 2.3215368 | TRUE |
| go1bb | go1b | 13837 | 0 | a | 8 | 8 | 1.5000 | 0.9000 | 150 | 2.99 | 1.767144 | 0.636172 | 3.5929579 | TRUE |
| go1bb | go1b | 13837 | 0 | a | 25 | 25 | 0.4300 | 0.7500 | 75 | 1.00 | 0.145220 | 0.441786 | 0.2935030 | TRUE |
| go1bb | go1b | 13837 | 0 | a | 23 | 23 | 0.7000 | 0.2900 | 70 | 1.60 | 0.384845 | 0.066052 | 0.3607174 | TRUE |
| go1bb | go1b | 13837 | 0 | a | 20 | 20 | 0.6000 | 0.3100 | 60 | 1.00 | 0.282743 | 0.075477 | 0.1791099 | TRUE |
| go1bb | go1b | 13837 | 0 | a | 21 | 21 | 0.5900 | 0.3000 | 59 | 10.34 | 0.273397 | 0.070686 | 1.7789073 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 5 | 5 | 0.4700 | 0.3000 | 47 | 8.92 | 0.173494 | 0.070686 | 1.0890432 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 22 | 22 | 0.4000 | 0.1500 | 40 | 15.00 | 0.125664 | 0.017671 | 1.0750128 | FALSE |
| go1bb | go1b | 13837 | 0 | a | 31 | 31 | 0.1700 | 0.4000 | 40 | 1.80 | 0.022698 | 0.125664 | 0.1335254 | FALSE |
| go1bb | go1b | 13837 | 1 | | 34 | 34 | 0.1700 | 0.1900 | 19 | 2.60 | 0.022698 | 0.028353 | 0.0663661 | FALSE |
| go1bb | go1b | 13837 | 1 | | 33 | 33 | 0.1200 | 0.1100 | 12 | 2.81 | 0.011310 | 0.009503 | 0.0292423 | FALSE |
| go1bc | go1b | 13837 | 0 | a | 5 | 5 | 0.1800 | 0.1800 | 18 | 6.14 | 0.025447 | 0.025447 | 0.1562438 | FALSE |
| go1bc | go1b | 13837 | 0 | a | 3 | 3 | 0.1300 | 0.1800 | 18 | 2.61 | 0.013273 | 0.025447 | 0.0505297 | FALSE |
| go1bc | go1b | 13837 | 0 | a | 2 | 2 | 0.1600 | 0.1600 | 16 | 3.67 | 0.020106 | 0.020106 | 0.0737897 | FALSE |
| go1bc | go1b | 13837 | 0 | a | 4 | 4 | 0.1500 | 0.1400 | 15 | 5.25 | 0.017671 | 0.015394 | 0.0867962 | FALSE |
| go1bc | go1b | 13837 | 0 | | 7 | 7 | 0.2900 | 0.2800 | 29 | 1.80 | 0.066052 | 0.061575 | 0.1148644 | FALSE |
| go1bc | go1b | 13837 | 0 | a | 6 | 6 | 0.2900 | 0.2700 | 29 | 0.90 | 0.066052 | 0.057255 | 0.0554883 | FALSE |
| go1bc | go1b | 13837 | 0 | a | 1 | 1 | 0.3500 | 0.2900 | 35 | 4.30 | 0.096211 | 0.066052 | 0.3488657 | FALSE |
| go1bd | go1b | 13837 | 0 | | 1 | 1 | 0.1300 | 0.1000 | 13 | 3.15 | 0.013273 | 0.007854 | 0.0332753 | FALSE |
| go1bd | go1b | 13837 | 0 | | 2 | 2 | 0.4000 | 0.4300 | 43 | 2.00 | 0.125664 | 0.145220 | 0.2708836 | TRUE |
| go1be | go1b | 13837 | 0 | | 2 | 2 | 0.1200 | 0.1900 | 19 | 4.93 | 0.011310 | 0.028353 | 0.0977682 | FALSE |
| go1be | go1b | 13837 | 0 | | 1 | 1 | 0.5500 | 0.3100 | 55 | 7.98 | 0.237583 | 0.075477 | 1.2491072 | FALSE |
| go1bf | go1b | 13837 | 0 | | 1 | 1 | 0.2500 | 0.3000 | 30 | 7.03 | 0.049087 | 0.070686 | 0.4210025 | FALSE |
| go1bh | go1b | 13837 | 0 | | 1 | 1 | 0.0900 | 0.1700 | 17 | 6.71 | 0.006362 | 0.022698 | 0.0974953 | FALSE |
| go1bh | go1b | 13837 | 0 | | 2 | 2 | 0.0900 | 0.1600 | 16 | 6.79 | 0.006362 | 0.020106 | 0.0898585 | FALSE |
| go1bh | go1b | 13837 | 0 | | 7 | 7 | 0.1700 | 0.2900 | 29 | 2.40 | 0.022698 | 0.066052 | 0.1064999 | FALSE |
| go1bh | go1b | 13837 | 0 | | 6 | 6 | 0.1600 | 0.2000 | 20 | 1.60 | 0.020106 | 0.031416 | 0.0412177 | FALSE |
| go1bh | go1b | 13837 | 2 | | 5 | 5 | 0.1700 | 0.1400 | 17 | 2.76 | 0.022698 | 0.015394 | 0.0525667 | FALSE |
| go1bh | go1b | 13837 | 2 | | 4 | 4 | 0.2300 | 0.1600 | 23 | 1.85 | 0.041548 | 0.020106 | 0.0570297 | FALSE |
| go1bh | go1b | 13837 | 2 | | 3 | 3 | 0.3000 | 0.1900 | 30 | 4.58 | 0.070686 | 0.028353 | 0.2267985 | FALSE |
| go1bi | go1b | 13837 | 0 | | 3 | 3 | 0.1200 | 0.1600 | 16 | 2.20 | 0.011310 | 0.020106 | 0.0345575 | FALSE |
| go1bi | go1b | 13837 | 0 | | 2 | 2 | 0.1500 | 0.1500 | 15 | 3.03 | 0.017671 | 0.017671 | 0.0535445 | FALSE |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| go1bi | go1b | 13837 | 0 | | 1 | 1 | 0.2200 | 0.1200 | 22 | 5.76 | 0.038013 | 0.011310 | 0.1420501 | FALSE |
| go1bi | go1b | 13837 | 0 | | 4 | 4 | 0.3600 | 0.5000 | 50 | 7.86 | 0.101788 | 0.196349 | 1.1716780 | FALSE |
| go1bi | go1b | 13837 | 2 | | 5 | 5 | 0.1200 | 0.1000 | 12 | 4.15 | 0.011310 | 0.007854 | 0.0397647 | FALSE |
| go1bi | go1b | 13837 | 2 | | 6 | 6 | 0.2300 | 0.2500 | 25 | 2.69 | 0.041548 | 0.049087 | 0.1219039 | FALSE |
| go1bj | go1b | 13837 | 0 | | 1 | 1 | 0.2700 | 0.2800 | 28 | 2.40 | 0.057255 | 0.061575 | 0.1425968 | FALSE |
| go1bj | go1b | 13837 | 2 | | 3 | 3 | 0.1900 | 0.1600 | 19 | 2.49 | 0.028353 | 0.020106 | 0.0603315 | FALSE |
| go1bj | go1b | 13837 | 2 | | 4 | 4 | 0.1400 | 0.1800 | 18 | 1.53 | 0.015394 | 0.025447 | 0.0312431 | FALSE |
| go1bj | go1b | 13837 | 2 | | 5 | 5 | 0.2400 | 0.2700 | 27 | 5.33 | 0.045239 | 0.057255 | 0.2731475 | FALSE |
| go1bj | go1b | 13837 | 2 | | 2 | 2 | 0.2200 | 0.2100 | 22 | 1.78 | 0.038013 | 0.034636 | 0.0646578 | FALSE |
| go1ca | go1c | 13837 | 0 | | 1 | 1 | 0.1350 | 0.1100 | 14 | 1.00 | 0.014314 | 0.009503 | 0.0119086 | FALSE |
| go1ca | go1c | 13837 | 0 | | 2 | 2 | 0.1200 | 0.0800 | 12 | 3.20 | 0.011310 | 0.005027 | 0.0261380 | FALSE |
| go1cb | go1c | 13837 | 0 | | 6 | 6 | 0.0600 | 0.1800 | 18 | 6.90 | 0.002827 | 0.025447 | 0.0975464 | FALSE |
| go1cb | go1c | 13837 | 0 | | 13 | 13 | 0.1400 | 0.1000 | 14 | 2.75 | 0.015394 | 0.007854 | 0.0319657 | FALSE |
| go1cb | go1c | 13837 | 0 | | 7 | 7 | 0.2400 | 0.2400 | 24 | 2.50 | 0.045239 | 0.045239 | 0.1130972 | FALSE |
| go1cb | go1c | 13837 | 0 | | 4 | 4 | 0.3700 | 0.2800 | 37 | 5.30 | 0.107521 | 0.061575 | 0.4481046 | TRUE |
| go1cb | go1c | 13837 | 0 | | 3 | 3 | 0.3200 | 0.3500 | 35 | 3.60 | 0.080425 | 0.096211 | 0.3179446 | FALSE |
| go1cb | go1c | 13837 | 0 | | 8 | 8 | 0.3200 | 0.3200 | 32 | 2.50 | 0.080425 | 0.080425 | 0.2010618 | FALSE |
| go1cb | go1c | 13837 | 0 | | 5 | 5 | 0.4600 | 0.2100 | 46 | 9.50 | 0.166190 | 0.034636 | 0.9539242 | FALSE |
| go1cc | go1c | 13837 | 0 | | 11 | 11 | 0.1150 | 0.1400 | 14 | 3.35 | 0.010387 | 0.015394 | 0.0431826 | FALSE |
| go1cc | go1c | 13837 | 0 | | 12 | 12 | 0.1000 | 0.1130 | 11 | 2.90 | 0.007854 | 0.010029 | 0.0259299 | FALSE |
| go1cc | go1c | 13837 | 0 | | 14 | 14 | 0.2000 | 0.1300 | 20 | 4.50 | 0.031416 | 0.013273 | 0.1005505 | TRUE |
| go1cc | go1c | 13837 | 0 | | 10 | 10 | 1.8000 | 3.2000 | 320 | 1.00 | 2.544688 | 8.042470 | 5.2935792 | TRUE |
| go1cc | go1c | 13837 | 0 | | 17 | 17 | 3.0700 | 1.7200 | 307 | 1.00 | 7.402293 | 2.323520 | 4.8629064 | TRUE |
| go1cc | go1c | 13837 | 0 | | 9 | 9 | 0.5100 | 0.6000 | 60 | 3.20 | 0.204282 | 0.282743 | 0.7792400 | TRUE |
| go1cc | go1c | 13837 | 0 | | 16 | 16 | 0.5400 | 0.5900 | 59 | 1.75 | 0.229022 | 0.273397 | 0.4396164 | FALSE |
| go1cc | go1c | 13837 | 0 | | 15 | 15 | 0.4600 | 0.3700 | 46 | 1.90 | 0.166190 | 0.107521 | 0.2600255 | FALSE |
| go1cc | go1c | 13837 | 1 | a | 32 | 32 | 0.1600 | 0.1200 | 16 | 2.80 | 0.020106 | 0.011310 | 0.0439823 | FALSE |
| go1cc | go1c | 13837 | 2 | | 35 | 35 | 0.1800 | 0.1300 | 18 | 4.50 | 0.025447 | 0.013273 | 0.0871202 | FALSE |
| go1cc | go1c | 13837 | 2 | | 37 | 37 | 0.0900 | 0.1300 | 13 | 2.00 | 0.006362 | 0.013273 | 0.0196349 | FALSE |
| go1cc | go1c | 13837 | 2 | | 34 | 34 | 0.2700 | 0.2200 | 27 | 2.89 | 0.057255 | 0.038013 | 0.1376633 | FALSE |
| go1cc | go1c | 13837 | 2 | | 33 | 33 | 0.2500 | 0.2200 | 25 | 2.85 | 0.049087 | 0.038013 | 0.1241183 | FALSE |
| go1cc | go1c | 13837 | 2 | | 38 | 38 | 0.1250 | 0.2200 | 22 | 5.95 | 0.012272 | 0.038013 | 0.1495981 | FALSE |
| go1cc | go1c | 13837 | 2 | | 36 | 36 | 1.2000 | 1.2000 | 120 | 1.20 | 1.130972 | 1.130972 | 1.3571669 | TRUE |
| go1cd | go1c | 13837 | 0 | a | 22 | 22 | 0.1300 | 0.2400 | 24 | 4.25 | 0.013273 | 0.045239 | 0.1243382 | FALSE |
| go1cd | go1c | 13837 | 0 | | 19 | 19 | 0.3300 | 0.3100 | 33 | 3.90 | 0.085530 | 0.075477 | 0.3139627 | FALSE |
| go1cd | go1c | 13837 | 0 | | 18 | 18 | 0.2200 | 0.3000 | 30 | 4.10 | 0.038013 | 0.070686 | 0.2228330 | FALSE |
| go1cd | go1c | 13837 | 0 | a | 20 | 20 | 0.3500 | 0.4600 | 46 | 11.20 | 0.096211 | 0.166190 | 1.4694473 | FALSE |
| go1cd | go1c | 13837 | 1 | a | 30 | 30 | 0.1800 | 0.1000 | 18 | 5.50 | 0.025447 | 0.007854 | 0.0915773 | FALSE |
| go1cd | go1c | 13837 | 1 | a | 31 | 31 | 0.3500 | 0.0700 | 35 | 6.80 | 0.096211 | 0.003848 | 0.3402028 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 27 | 27 | 0.1600 | 0.1000 | 16 | 2.75 | 0.020106 | 0.007854 | 0.0384452 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 28 | 28 | 0.1300 | 0.1100 | 13 | 3.00 | 0.013273 | 0.009503 | 0.0341648 | FALSE |
| go1cd | go1c | 13837 | 2 | | 29 | 29 | 0.1800 | 0.2100 | 21 | 2.75 | 0.025447 | 0.034636 | 0.0826140 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 23 | 23 | 0.1400 | 0.2000 | 20 | 2.90 | 0.015394 | 0.031416 | 0.0678741 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 26 | 26 | 0.8600 | 0.5300 | 86 | 0.88 | 0.580880 | 0.220618 | 0.3526592 | TRUE |
| go1cd | go1c | 13837 | 2 | a | 24 | 24 | 0.6000 | 0.2600 | 60 | 7.30 | 0.282743 | 0.053093 | 1.2258013 | TRUE |
| go1cd | go1c | 13837 | 2 | a | 25 | 25 | 0.4800 | 0.3900 | 48 | 20.50 | 0.180956 | 0.119459 | 3.0792491 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 21 | 21 | 0.2400 | 0.4300 | 43 | 1.70 | 0.045239 | 0.145220 | 0.1618901 | FALSE |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| go1bi | go1b | 13837 | 0 | | 1 | 1 | 0.2200 | 0.1200 | 22 | 5.76 | 0.038013 | 0.011310 | 0.1420501 | FALSE |
| go1bi | go1b | 13837 | 0 | | 4 | 4 | 0.3600 | 0.5000 | 50 | 7.86 | 0.101788 | 0.196349 | 1.1716780 | FALSE |
| go1bi | go1b | 13837 | 2 | | 5 | 5 | 0.1200 | 0.1000 | 12 | 4.15 | 0.011310 | 0.007854 | 0.0397647 | FALSE |
| go1bi | go1b | 13837 | 2 | | 6 | 6 | 0.2300 | 0.2500 | 25 | 2.69 | 0.041548 | 0.049087 | 0.1219039 | FALSE |
| go1bj | go1b | 13837 | 0 | | 1 | 1 | 0.2700 | 0.2800 | 28 | 2.40 | 0.057255 | 0.061575 | 0.1425968 | FALSE |
| go1bj | go1b | 13837 | 2 | | 3 | 3 | 0.1900 | 0.1600 | 19 | 2.49 | 0.028353 | 0.020106 | 0.0603315 | FALSE |
| go1bj | go1b | 13837 | 2 | | 4 | 4 | 0.1400 | 0.1800 | 18 | 1.53 | 0.015394 | 0.025447 | 0.0312431 | FALSE |
| go1bj | go1b | 13837 | 2 | | 5 | 5 | 0.2400 | 0.2700 | 27 | 5.33 | 0.045239 | 0.057255 | 0.2731475 | FALSE |
| go1bj | go1b | 13837 | 2 | | 2 | 2 | 0.2200 | 0.2100 | 22 | 1.78 | 0.038013 | 0.034636 | 0.0646578 | FALSE |
| go1ca | go1c | 13837 | 0 | | 1 | 1 | 0.1350 | 0.1100 | 14 | 1.00 | 0.014314 | 0.009503 | 0.0119086 | FALSE |
| go1ca | go1c | 13837 | 0 | | 2 | 2 | 0.1200 | 0.0800 | 12 | 3.20 | 0.011310 | 0.005027 | 0.0261380 | FALSE |
| go1cb | go1c | 13837 | 0 | | 6 | 6 | 0.0600 | 0.1800 | 18 | 6.90 | 0.002827 | 0.025447 | 0.0975464 | FALSE |
| go1cb | go1c | 13837 | 0 | | 13 | 13 | 0.1400 | 0.1000 | 14 | 2.75 | 0.015394 | 0.007854 | 0.0319657 | FALSE |
| go1cb | go1c | 13837 | 0 | | 7 | 7 | 0.2400 | 0.2400 | 24 | 2.50 | 0.045239 | 0.045239 | 0.1130972 | FALSE |
| go1cb | go1c | 13837 | 0 | | 4 | 4 | 0.3700 | 0.2800 | 37 | 5.30 | 0.107521 | 0.061575 | 0.4481046 | TRUE |
| go1cb | go1c | 13837 | 0 | | 3 | 3 | 0.3200 | 0.3500 | 35 | 3.60 | 0.080425 | 0.096211 | 0.3179446 | FALSE |
| go1cb | go1c | 13837 | 0 | | 8 | 8 | 0.3200 | 0.3200 | 32 | 2.50 | 0.080425 | 0.080425 | 0.2010618 | FALSE |
| go1cb | go1c | 13837 | 0 | | 5 | 5 | 0.4600 | 0.2100 | 46 | 9.50 | 0.166190 | 0.034636 | 0.9539242 | FALSE |
| go1cc | go1c | 13837 | 0 | | 11 | 11 | 0.1150 | 0.1400 | 14 | 3.35 | 0.010387 | 0.015394 | 0.0431826 | FALSE |
| go1cc | go1c | 13837 | 0 | | 12 | 12 | 0.1000 | 0.1130 | 11 | 2.90 | 0.007854 | 0.010029 | 0.0259299 | FALSE |
| go1cc | go1c | 13837 | 0 | | 14 | 14 | 0.2000 | 0.1300 | 20 | 4.50 | 0.031416 | 0.013273 | 0.1005505 | TRUE |
| go1cc | go1c | 13837 | 0 | | 10 | 10 | 1.8000 | 3.2000 | 320 | 1.00 | 2.544688 | 8.042470 | 5.2935792 | TRUE |
| go1cc | go1c | 13837 | 0 | | 17 | 17 | 3.0700 | 1.7200 | 307 | 1.00 | 7.402293 | 2.323520 | 4.8629064 | TRUE |
| go1cc | go1c | 13837 | 0 | | 9 | 9 | 0.5100 | 0.6000 | 60 | 3.20 | 0.204282 | 0.282743 | 0.7792400 | TRUE |
| go1cc | go1c | 13837 | 0 | | 16 | 16 | 0.5400 | 0.5900 | 59 | 1.75 | 0.229022 | 0.273397 | 0.4396164 | FALSE |
| go1cc | go1c | 13837 | 0 | | 15 | 15 | 0.4600 | 0.3700 | 46 | 1.90 | 0.166190 | 0.107521 | 0.2600255 | FALSE |
| go1cc | go1c | 13837 | 1 | a | 32 | 32 | 0.1600 | 0.1200 | 16 | 2.80 | 0.020106 | 0.011310 | 0.0439823 | FALSE |
| go1cc | go1c | 13837 | 2 | | 35 | 35 | 0.1800 | 0.1300 | 18 | 4.50 | 0.025447 | 0.013273 | 0.0871202 | FALSE |
| go1cc | go1c | 13837 | 2 | | 37 | 37 | 0.0900 | 0.1300 | 13 | 2.00 | 0.006362 | 0.013273 | 0.0196349 | FALSE |
| go1cc | go1c | 13837 | 2 | | 34 | 34 | 0.2700 | 0.2200 | 27 | 2.89 | 0.057255 | 0.038013 | 0.1376633 | FALSE |
| go1cc | go1c | 13837 | 2 | | 33 | 33 | 0.2500 | 0.2200 | 25 | 2.85 | 0.049087 | 0.038013 | 0.1241183 | FALSE |
| go1cc | go1c | 13837 | 2 | | 38 | 38 | 0.1250 | 0.2200 | 22 | 5.95 | 0.012272 | 0.038013 | 0.1495981 | FALSE |
| go1cc | go1c | 13837 | 2 | | 36 | 36 | 1.2000 | 1.2000 | 120 | 1.20 | 1.130972 | 1.130972 | 1.3571669 | TRUE |
| go1cd | go1c | 13837 | 0 | a | 22 | 22 | 0.1300 | 0.2400 | 24 | 4.25 | 0.013273 | 0.045239 | 0.1243382 | FALSE |
| go1cd | go1c | 13837 | 0 | | 19 | 19 | 0.3300 | 0.3100 | 33 | 3.90 | 0.085530 | 0.075477 | 0.3139627 | FALSE |
| go1cd | go1c | 13837 | 0 | | 18 | 18 | 0.2200 | 0.3000 | 30 | 4.10 | 0.038013 | 0.070686 | 0.2228330 | FALSE |
| go1cd | go1c | 13837 | 0 | a | 20 | 20 | 0.3500 | 0.4600 | 46 | 11.20 | 0.096211 | 0.166190 | 1.4694473 | FALSE |
| go1cd | go1c | 13837 | 1 | a | 30 | 30 | 0.1800 | 0.1000 | 18 | 5.50 | 0.025447 | 0.007854 | 0.0915773 | FALSE |
| go1cd | go1c | 13837 | 1 | a | 31 | 31 | 0.3500 | 0.0700 | 35 | 6.80 | 0.096211 | 0.003848 | 0.3402028 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 27 | 27 | 0.1600 | 0.1000 | 16 | 2.75 | 0.020106 | 0.007854 | 0.0384452 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 28 | 28 | 0.1300 | 0.1100 | 13 | 3.00 | 0.013273 | 0.009503 | 0.0341648 | FALSE |
| go1cd | go1c | 13837 | 2 | | 29 | 29 | 0.1800 | 0.2100 | 21 | 2.75 | 0.025447 | 0.034636 | 0.0826140 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 23 | 23 | 0.1400 | 0.2000 | 20 | 2.90 | 0.015394 | 0.031416 | 0.0678741 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 26 | 26 | 0.8600 | 0.5300 | 86 | 0.88 | 0.580880 | 0.220618 | 0.3526592 | TRUE |
| go1cd | go1c | 13837 | 2 | a | 24 | 24 | 0.6000 | 0.2600 | 60 | 7.30 | 0.282743 | 0.053093 | 1.2258013 | TRUE |
| go1cd | go1c | 13837 | 2 | a | 25 | 25 | 0.4800 | 0.3900 | 48 | 20.50 | 0.180956 | 0.119459 | 3.0792491 | FALSE |
| go1cd | go1c | 13837 | 2 | a | 21 | 21 | 0.2400 | 0.4300 | 43 | 1.70 | 0.045239 | 0.145220 | 0.1618901 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| go1ce | go1c | 13837 | 0 | | 40 | 40 | 0.2800 | 0.1000 | 28 | 9.00 | 0.061575 | 0.007854 | 0.3124311 | FALSE |
| go1ce | go1c | 13837 | 0 | | 41 | 41 | 0.1400 | 0.3000 | 30 | 2.20 | 0.015394 | 0.070686 | 0.0946875 | FALSE |
| go1ce | go1c | 13837 | 0 | | 39 | 39 | 0.6000 | 0.1600 | 60 | 8.85 | 0.282743 | 0.020106 | 1.3401080 | TRUE |
| go1cf | go1c | 13837 | 0 | | 43 | 43 | 0.1800 | 0.0900 | 18 | 7.40 | 0.025447 | 0.006362 | 0.1176918 | FALSE |
| go1cf | go1c | 13837 | 0 | | 45 | 45 | 0.1200 | 0.2000 | 20 | 7.22 | 0.011310 | 0.031416 | 0.1542395 | FALSE |
| go1cf | go1c | 13837 | 0 | | 46 | 46 | 0.3100 | 0.3900 | 39 | 6.39 | 0.075477 | 0.119459 | 0.6228194 | FALSE |
| go1cf | go1c | 13837 | 0 | | 44 | 44 | 0.4900 | 0.8400 | 84 | 1.20 | 0.188574 | 0.554176 | 0.4456502 | TRUE |
| go1cf | go1c | 13837 | 0 | | 42 | 42 | 0.5700 | 0.4100 | 57 | 5.70 | 0.255176 | 0.132025 | 1.1035228 | FALSE |
| go1cg | go1c | 13837 | 0 | | 47 | 47 | 1.7000 | 0.2900 | 170 | 2.40 | 2.269799 | 0.066052 | 2.8030208 | TRUE |
| go1ch | go1c | 13837 | 0 | | 49 | 49 | 0.1600 | 0.0900 | 16 | 3.30 | 0.020106 | 0.006362 | 0.0436720 | FALSE |
| go1ch | go1c | 13837 | 0 | | 52 | 52 | 1.7500 | 0.3800 | 175 | 1.45 | 2.405280 | 0.113411 | 1.8260512 | TRUE |
| go1ch | go1c | 13837 | 0 | | 48 | 48 | 1.7500 | 0.3200 | 175 | 4.60 | 2.405280 | 0.080425 | 5.7171205 | TRUE |
| go1ch | go1c | 13837 | 0 | | 51 | 51 | 1.4500 | 0.4300 | 145 | 1.15 | 1.651298 | 0.145220 | 1.0329980 | TRUE |
| go1ch | go1c | 13837 | 0 | | 50 | 50 | 1.2000 | 0.5100 | 120 | 2.20 | 1.130972 | 0.204282 | 1.4687797 | TRUE |
| go1ch | go1c | 13837 | 0 | | 54 | 54 | 0.5900 | 0.1700 | 59 | 2.82 | 0.273397 | 0.022698 | 0.4174937 | FALSE |
| go1ch | go1c | 13837 | 0 | | 55 | 55 | 0.5000 | 0.5000 | 50 | 6.30 | 0.196349 | 0.196349 | 1.2370011 | FALSE |
| go1ch | go1c | 13837 | 0 | | 53 | 53 | 0.4000 | 0.4700 | 47 | 3.70 | 0.125664 | 0.173494 | 0.5534421 | FALSE |
| go1ci | go1c | 13837 | 0 | | 58 | 58 | 0.5700 | 1.8500 | 185 | 1.60 | 0.255176 | 2.688023 | 2.3545589 | TRUE |
| go1ci | go1c | 13837 | 0 | | 56 | 56 | 0.9500 | 0.3000 | 95 | 6.90 | 0.708821 | 0.070686 | 2.6892992 | TRUE |
| go1ci | go1c | 13837 | 0 | | 57 | 57 | 0.5000 | 0.3800 | 50 | 8.00 | 0.196349 | 0.113411 | 1.2390431 | TRUE |
| go1cj | go1c | 13837 | 0 | b | 63 | 63 | 0.1900 | 0.0650 | 19 | 3.00 | 0.028353 | 0.003318 | 0.0475067 | FALSE |
| go1cj | go1c | 13837 | 0 | b | 61 | 61 | 0.1600 | 0.1000 | 16 | 3.30 | 0.020106 | 0.007854 | 0.0461342 | FALSE |
| go1cj | go1c | 13837 | 0 | b | 59 | 59 | 0.2900 | 0.2200 | 29 | 5.60 | 0.066052 | 0.038013 | 0.2913825 | FALSE |
| go1cj | go1c | 13837 | 0 | b | 60 | 60 | 0.1700 | 0.2600 | 26 | 6.70 | 0.022698 | 0.053093 | 0.2538994 | FALSE |
| go1cj | go1c | 13837 | 0 | b | 72 | 72 | 2.4000 | 1.5000 | 240 | 1.15 | 4.523890 | 1.767144 | 3.6173445 | FALSE |
| go1cj | go1c | 13837 | 0 | b | 62 | 62 | 0.3800 | 0.4200 | 42 | 10.20 | 0.113411 | 0.138544 | 1.2849731 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 69 | 69 | 0.1800 | 0.1000 | 18 | 3.57 | 0.025447 | 0.007854 | 0.0594420 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 64 | 64 | 0.1500 | 0.1700 | 17 | 2.90 | 0.017671 | 0.022698 | 0.0585357 | FALSE |
| go1cj | go1c | 13837 | 3 | | 74 | 74 | 0.1600 | 0.1300 | 16 | 4.70 | 0.020106 | 0.013273 | 0.0784416 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 68 | 68 | 0.1500 | 0.1500 | 15 | 2.86 | 0.017671 | 0.017671 | 0.0505403 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 71 | 71 | 0.2800 | 0.1900 | 28 | 9.30 | 0.061575 | 0.028353 | 0.4181653 | TRUE |
| go1cj | go1c | 13837 | 3 | b | 65 | 65 | 0.2200 | 0.2800 | 28 | 3.40 | 0.038013 | 0.061575 | 0.1693003 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 66 | 66 | 0.2600 | 0.2600 | 26 | 3.60 | 0.053093 | 0.053093 | 0.1911343 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 73 | 73 | 0.2300 | 0.2000 | 23 | 3.00 | 0.041548 | 0.031416 | 0.1094451 | FALSE |
| go1cj | go1c | 13837 | 3 | | 75 | 75 | 0.2000 | 0.0700 | 20 | 4.70 | 0.031416 | 0.003848 | 0.0828712 | FALSE |
| go1cj | go1c | 13837 | 3 | b | 70 | 70 | 0.3500 | 0.2400 | 35 | 9.30 | 0.096211 | 0.045239 | 0.6577429 | TRUE |
| go1cj | go1c | 13837 | 3 | b | 67 | 67 | 0.3100 | 0.2800 | 31 | 3.00 | 0.075477 | 0.061575 | 0.2055778 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 6 | 6 | 0.1900 | 0.1800 | 19 | 6.50 | 0.028353 | 0.025447 | 0.1748491 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 1 | 1 | 0.1100 | 0.1900 | 19 | 7.75 | 0.009503 | 0.028353 | 0.1466926 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 2 | 2 | 0.1100 | 0.1900 | 19 | 2.86 | 0.009503 | 0.028353 | 0.0541343 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 7 | 7 | 0.1000 | 0.1500 | 15 | 8.00 | 0.007854 | 0.017671 | 0.1021017 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 9 | 9 | 0.1300 | 0.1200 | 13 | 3.00 | 0.013273 | 0.011310 | 0.0368744 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 4 | 4 | 0.2900 | 0.2000 | 29 | 4.80 | 0.066052 | 0.031416 | 0.2339228 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 3 | 3 | 0.2200 | 0.2900 | 29 | 2.10 | 0.038013 | 0.066052 | 0.1092684 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 5 | 5 | 0.4600 | 0.4600 | 46 | 3.00 | 0.166190 | 0.166190 | 0.4985703 | FALSE |
| ji1aa | ji1a | 9151 | 0 | a | 8 | 8 | 0.4600 | 0.3200 | 46 | 9.00 | 0.166190 | 0.080425 | 1.1097667 | FALSE |
| ji1ab | ji1a | 9151 | 0 | | 10 | 10 | 0.1400 | 0.0700 | 14 | 4.80 | 0.015394 | 0.003848 | 0.0461814 | FALSE |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ji1ac | ji1a | 9151 | 0 | | 13 | 13 | 2.6000 | 2.6000 | 260 | 1.50 | 5.309287 | 5.309287 | 7.9639307 | TRUE |
| ji1ac | ji1a | 9151 | 0 | | 11 | 11 | 0.3800 | 0.6300 | 63 | 8.00 | 0.113411 | 0.311724 | 1.7005427 | TRUE |
| ji1ad | ji1a | 9151 | 0 | b | 17 | 17 | 0.1700 | 0.1200 | 17 | 3.60 | 0.022698 | 0.011310 | 0.0612139 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 16 | 16 | 0.1100 | 0.1500 | 15 | 3.50 | 0.009503 | 0.017671 | 0.0475558 | FALSE |
| ji1ad | ji1a | 9151 | 0 | | 14 | 14 | 0.1000 | 0.1400 | 14 | 7.80 | 0.007854 | 0.015394 | 0.0906663 | FALSE |
| ji1ad | ji1a | 9151 | 0 | | 19 | 19 | 0.1200 | 0.1300 | 13 | 2.00 | 0.011310 | 0.013273 | 0.0245829 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 20 | 20 | 0.0800 | 0.1300 | 13 | 5.00 | 0.005027 | 0.013273 | 0.0457494 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 21 | 21 | 0.2400 | 0.2900 | 29 | 4.20 | 0.045239 | 0.066052 | 0.2337107 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 23 | 23 | 0.1700 | 0.2900 | 29 | 3.80 | 0.022698 | 0.066052 | 0.1686248 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 25 | 25 | 0.2800 | 0.2400 | 28 | 5.00 | 0.061575 | 0.045239 | 0.2670352 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 12 | 12 | 0.2800 | 0.0100 | 28 | 17.50 | 0.061575 | 0.000079 | 0.5394699 | FALSE |
| ji1ad | ji1a | 9151 | 0 | | 26 | 26 | 0.2000 | 0.2600 | 26 | 2.10 | 0.031416 | 0.053093 | 0.0887342 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 18 | 18 | 0.2500 | 0.2300 | 25 | 7.50 | 0.049087 | 0.041548 | 0.3398808 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 22 | 22 | 0.2400 | 0.2400 | 24 | 1.86 | 0.045239 | 0.045239 | 0.0841443 | FALSE |
| ji1ad | ji1a | 9151 | 0 | | 28 | 28 | 0.2000 | 0.2400 | 24 | 2.40 | 0.031416 | 0.045239 | 0.0919858 | FALSE |
| ji1ad | ji1a | 9151 | 0 | | 27 | 27 | 0.1500 | 0.2100 | 21 | 7.50 | 0.017671 | 0.034636 | 0.1961530 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 24 | 24 | 0.2200 | 0.3400 | 34 | 5.20 | 0.038013 | 0.090792 | 0.3348935 | FALSE |
| ji1ad | ji1a | 9151 | 0 | b | 15 | 15 | 0.2000 | 0.3200 | 32 | 12.00 | 0.031416 | 0.080425 | 0.6710436 | FALSE |
| ji1ae | ji1a | 9151 | 0 | | 30 | 30 | 0.2600 | 0.2900 | 29 | 2.90 | 0.053093 | 0.066052 | 0.1727600 | FALSE |
| ji1ae | ji1a | 9151 | 0 | | 31 | 31 | 0.2300 | 0.2400 | 24 | 2.90 | 0.041548 | 0.045239 | 0.1258403 | FALSE |
| ji1ae | ji1a | 9151 | 0 | | 32 | 32 | 0.7500 | 0.3600 | 75 | 1.10 | 0.441786 | 0.101788 | 0.2989655 | TRUE |
| ji1ae | ji1a | 9151 | 0 | | 33 | 33 | 0.4700 | 0.6100 | 61 | 1.60 | 0.173494 | 0.292246 | 0.3725926 | TRUE |
| ji1ae | ji1a | 9151 | 0 | | 29 | 29 | 0.2000 | 0.4300 | 43 | 30.80 | 0.031416 | 0.145220 | 2.7201928 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 41 | 41 | 0.1600 | 0.1500 | 16 | 3.30 | 0.020106 | 0.017671 | 0.0623331 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 44 | 44 | 0.1500 | 0.1400 | 15 | 2.00 | 0.017671 | 0.015394 | 0.0330652 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 49 | 49 | 0.0900 | 0.1500 | 15 | 3.70 | 0.006362 | 0.017671 | 0.0444614 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 34 | 34 | 0.2400 | 0.2900 | 29 | 10.25 | 0.045239 | 0.066052 | 0.5703655 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 47 | 47 | 0.2600 | 0.1900 | 26 | 9.00 | 0.053093 | 0.028353 | 0.3665057 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 48 | 48 | 0.2500 | 0.2500 | 25 | 3.30 | 0.049087 | 0.049087 | 0.1619882 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 40 | 40 | 0.1400 | 0.2400 | 24 | 4.00 | 0.015394 | 0.045239 | 0.1212654 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 45 | 45 | 0.2100 | 0.2100 | 21 | 1.50 | 0.034636 | 0.034636 | 0.0519540 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 43 | 43 | 0.1400 | 0.2100 | 21 | 8.30 | 0.015394 | 0.034636 | 0.2076238 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 39 | 39 | 0.1800 | 0.2000 | 20 | 2.30 | 0.025447 | 0.031416 | 0.0653922 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 36 | 36 | 0.1300 | 0.3900 | 39 | 15.50 | 0.013273 | 0.119459 | 1.0286744 | TRUE |
| ji1af | ji1a | 9151 | 0 | c | 46 | 46 | 0.2400 | 0.3600 | 36 | 12.00 | 0.045239 | 0.101788 | 0.8821585 | FALSE |
| ji1af | ji1a | 9151 | 0 | c | 38 | 38 | 2.0000 | 1.2000 | 200 | 1.50 | 3.141590 | 1.130972 | 3.2044218 | TRUE |
| ji1af | ji1a | 9151 | 0 | c | 35 | 35 | 0.5900 | 0.3200 | 59 | 5.80 | 0.273397 | 0.080425 | 1.0260826 | TRUE |
| ji1af | ji1a | 9151 | 0 | c | 42 | 42 | 0.4800 | 0.4800 | 48 | 11.80 | 0.180956 | 0.180956 | 2.1352759 | TRUE |
| ji1af | ji1a | 9151 | 0 | c | 37 | 37 | 0.4600 | 0.3300 | 46 | 13.00 | 0.166190 | 0.085530 | 1.6361793 | FALSE |
| ji1ag | ji1a | 9151 | 0 | | 85 | 85 | 0.0800 | 0.1400 | 14 | 3.30 | 0.005027 | 0.015394 | 0.0336936 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 78 | 78 | 0.1200 | 0.1100 | 12 | 2.00 | 0.011310 | 0.009503 | 0.0208130 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 55 | 55 | 0.1000 | 0.0700 | 10 | 3.60 | 0.007854 | 0.003848 | 0.0210644 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 86 | 86 | 0.2900 | 0.2100 | 29 | 3.60 | 0.066052 | 0.034636 | 0.1812383 | TRUE |
| ji1ag | ji1a | 9151 | 0 | c | 52 | 52 | 0.2100 | 0.2800 | 28 | 10.46 | 0.034636 | 0.061575 | 0.5031845 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 87 | 87 | 0.1500 | 0.2800 | 28 | 2.90 | 0.017671 | 0.061575 | 0.1149076 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 88 | 88 | 0.2700 | 0.2700 | 27 | 2.50 | 0.057255 | 0.057255 | 0.1431387 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 72 | 72 | 0.2700 | 0.0900 | 27 | 3.70 | 0.057255 | 0.006362 | 0.1176918 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ji1ag | ji1a | 9151 | 0 | c | 71 | 71 | 0.1700 | 0.2700 | 27 | 2.20 | 0.022698 | 0.057255 | 0.0879488 | FALSE |
| ji1ag | ji1a | 9151 | 0 | | 84 | 84 | 0.2500 | 0.1700 | 25 | 2.00 | 0.049087 | 0.022698 | 0.0717853 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 81 | 81 | 0.1600 | 0.2400 | 24 | 2.20 | 0.020106 | 0.045239 | 0.0718796 | FALSE |
| ji1ag | ji1a | 9151 | 0 | | 89 | 89 | 0.1700 | 0.2000 | 20 | 4.00 | 0.022698 | 0.031416 | 0.1082278 | FALSE |
| ji1ag | ji1a | 9151 | 0 | | 82 | 82 | 0.3300 | 0.3800 | 38 | 3.30 | 0.085530 | 0.113411 | 0.3282530 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 50 | 50 | 0.3100 | 0.3500 | 35 | 7.00 | 0.075477 | 0.096211 | 0.6009076 | TRUE |
| ji1ag | ji1a | 9151 | 0 | c | 80 | 80 | 0.3100 | 0.2700 | 31 | 4.00 | 0.075477 | 0.057255 | 0.2654644 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 51 | 51 | 3.3000 | 1.0000 | 330 | 1.50 | 8.552979 | 0.785398 | 7.0037822 | TRUE |
| ji1ag | ji1a | 9151 | 0 | c | 53 | 53 | 0.2900 | 0.4800 | 48 | 9.00 | 0.066052 | 0.180956 | 1.1115338 | TRUE |
| ji1ag | ji1a | 9151 | 0 | c | 77 | 77 | 0.4700 | 0.4700 | 47 | 3.00 | 0.173494 | 0.173494 | 0.5204829 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 79 | 79 | 0.4700 | 0.4700 | 47 | 4.80 | 0.173494 | 0.173494 | 0.8327727 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 73 | 73 | 0.3100 | 0.4400 | 44 | 7.60 | 0.075477 | 0.152053 | 0.8646127 | FALSE |
| ji1ag | ji1a | 9151 | 0 | | 83 | 83 | 0.4300 | 0.4200 | 43 | 5.00 | 0.145220 | 0.138544 | 0.7094103 | FALSE |
| ji1ag | ji1a | 9151 | 0 | c | 54 | 54 | 0.4200 | 0.4200 | 42 | 2.00 | 0.138544 | 0.138544 | 0.2770882 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 60 | 60 | 0.1900 | 0.1400 | 19 | 3.70 | 0.028353 | 0.015394 | 0.0809313 | TRUE |
| ji1ah | ji1a | 9151 | 0 | c | 65 | 65 | 0.1900 | 0.1900 | 19 | 3.60 | 0.028353 | 0.028353 | 0.1020703 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 56 | 56 | 0.1000 | 0.1300 | 13 | 4.10 | 0.007854 | 0.013273 | 0.0433107 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 67 | 67 | 0.2500 | 0.2800 | 28 | 5.20 | 0.049087 | 0.061575 | 0.2877225 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 70 | 70 | 0.2500 | 0.2200 | 25 | 6.30 | 0.049087 | 0.038013 | 0.2743668 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 62 | 62 | 0.2100 | 0.2300 | 23 | 4.10 | 0.034636 | 0.041548 | 0.1561763 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 68 | 68 | 0.2100 | 0.2100 | 21 | 3.00 | 0.034636 | 0.034636 | 0.1039081 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 61 | 61 | 0.1700 | 0.2100 | 21 | 3.50 | 0.022698 | 0.034636 | 0.1003345 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 57 | 57 | 0.1100 | 0.2000 | 20 | 4.10 | 0.009503 | 0.031416 | 0.0838844 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 64 | 64 | 0.3400 | 0.3600 | 36 | 5.30 | 0.090792 | 0.101788 | 0.5103356 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 75 | 75 | 0.3400 | 0.2200 | 34 | 5.00 | 0.090792 | 0.038013 | 0.3220130 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 74 | 74 | 0.3000 | 0.2700 | 30 | 4.40 | 0.070686 | 0.057255 | 0.2814708 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 63 | 63 | 0.3000 | 0.2600 | 30 | 3.85 | 0.070686 | 0.053093 | 0.2382739 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 76 | 76 | 0.3000 | 0.1600 | 30 | 4.20 | 0.070686 | 0.020106 | 0.1906631 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 66 | 66 | 0.2900 | 0.3000 | 30 | 3.80 | 0.066052 | 0.070686 | 0.2598016 | FALSE |
| ji1ah | ji1a | 9151 | 0 | c | 58 | 58 | 2.5000 | 3.0000 | 300 | 1.00 | 4.908734 | 7.068578 | 5.9886559 | TRUE |
| ji1ah | ji1a | 9151 | 0 | c | 69 | 69 | 2.0000 | 2.0000 | 200 | 1.20 | 3.141590 | 3.141590 | 3.7699080 | TRUE |
| ji1ah | ji1a | 9151 | 0 | c | 59 | 59 | 1.5000 | 2.0000 | 200 | 0.60 | 1.767144 | 3.141590 | 1.4726203 | TRUE |
| ji1ai | ji1a | 9151 | 0 | | 93 | 93 | 0.1200 | 0.0800 | 12 | 5.30 | 0.011310 | 0.005027 | 0.0432911 | FALSE |
| ji1ai | ji1a | 9151 | 0 | | 92 | 92 | 0.1600 | 0.2100 | 21 | 5.30 | 0.020106 | 0.034636 | 0.1450668 | FALSE |
| ji1ai | ji1a | 9151 | 0 | | 90 | 90 | 0.1900 | 0.3600 | 36 | 8.00 | 0.028353 | 0.101788 | 0.5205615 | TRUE |
| ji1ai | ji1a | 9151 | 0 | | 91 | 91 | 0.3000 | 0.3300 | 33 | 7.90 | 0.070686 | 0.085530 | 0.6170515 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 96 | 96 | 0.1200 | 0.1900 | 19 | 9.20 | 0.011310 | 0.028353 | 0.1824478 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 103 | 103 | 0.1800 | 0.0700 | 18 | 6.50 | 0.025447 | 0.003848 | 0.0952098 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 97 | 97 | 0.1300 | 0.0600 | 13 | 4.60 | 0.013273 | 0.002827 | 0.0370315 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 94 | 94 | 0.1700 | 0.2600 | 26 | 11.50 | 0.022698 | 0.053093 | 0.4357974 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 102 | 102 | 0.1700 | 0.2200 | 22 | 3.70 | 0.022698 | 0.038013 | 0.1123158 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 99 | 99 | 0.3500 | 0.3500 | 35 | 2.85 | 0.096211 | 0.096211 | 0.2742019 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 101 | 101 | 0.3400 | 0.3400 | 34 | 11.00 | 0.090792 | 0.090792 | 0.9987115 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 98 | 98 | 0.3200 | 0.3200 | 32 | 5.60 | 0.080425 | 0.080425 | 0.4503783 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 100 | 100 | 0.3100 | 0.3100 | 31 | 3.00 | 0.075477 | 0.075477 | 0.2264301 | FALSE |
| ji1aj | ji1a | 9151 | 0 | | 95 | 95 | 1.5000 | 1.0000 | 150 | 0.50 | 1.767144 | 0.785398 | 0.6381355 | TRUE |
| ji1aj | ji1a | 9151 | 0 | | 114 | 114 | 0.1800 | 0.1300 | 18 | 4.30 | 0.025447 | 0.013273 | 0.0832482 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ji1aj | ji1a | 9151 | 0 | 106 | 106 | 0.1600 | 0.1800 | 18 | 5.80 | 0.020106 | 0.025447 | 0.1321039 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 112 | 112 | 0.1300 | 0.1800 | 18 | 4.50 | 0.013273 | 0.025447 | 0.0871202 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 110 | 110 | 0.1700 | 0.1700 | 17 | 2.00 | 0.022698 | 0.022698 | 0.0453960 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 108 | 108 | 0.0700 | 0.1700 | 17 | 9.30 | 0.003848 | 0.022698 | 0.1234409 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 111 | 111 | 0.1600 | 0.1600 | 16 | 3.00 | 0.020106 | 0.020106 | 0.0603185 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 104 | 104 | 0.1600 | 0.1400 | 16 | 5.50 | 0.020106 | 0.015394 | 0.0976249 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 107 | 107 | 0.1300 | 0.1500 | 15 | 6.00 | 0.013273 | 0.017671 | 0.0928340 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 116 | 116 | 0.1400 | 0.1300 | 14 | 3.00 | 0.015394 | 0.013273 | 0.0430005 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 109 | 109 | 0.1200 | 0.1400 | 14 | 9.00 | 0.011310 | 0.015394 | 0.1201658 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 115 | 115 | 0.1100 | 0.1100 | 11 | 3.40 | 0.009503 | 0.009503 | 0.0323113 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 117 | 117 | 0.2200 | 0.2700 | 27 | 2.50 | 0.038013 | 0.057255 | 0.1190859 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 113 | 113 | 0.1900 | 0.2400 | 24 | 5.00 | 0.028353 | 0.045239 | 0.1839794 | FALSE |
| ji1aj | ji1a | 9151 | 0 | 105 | 105 | 0.2000 | 0.2300 | 23 | 5.70 | 0.031416 | 0.041548 | 0.2079458 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 2 | 2 | 0.1800 | 0.1500 | 18 | 7.00 | 0.025447 | 0.017671 | 0.1509141 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 7 | 7 | 0.1800 | 0.1500 | 18 | 6.30 | 0.025447 | 0.017671 | 0.1358227 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 6 | 6 | 0.1500 | 0.1300 | 15 | 2.40 | 0.017671 | 0.013273 | 0.0371336 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 5 | 5 | 0.1400 | 0.1000 | 14 | 3.30 | 0.015394 | 0.007854 | 0.0383588 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 8 | 8 | 0.0800 | 0.1300 | 13 | 5.40 | 0.005027 | 0.013273 | 0.0494094 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 3 | 3 | 0.1200 | 0.1000 | 12 | 5.50 | 0.011310 | 0.007854 | 0.0527002 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 4 | 4 | 0.1100 | 0.1100 | 11 | 2.80 | 0.009503 | 0.009503 | 0.0266093 | FALSE |
| ji1ba | ji1b | 9151 | 0 | 1 | 1 | 0.3000 | 0.2100 | 30 | 9.10 | 0.070686 | 0.034636 | 0.4792142 | FALSE |
| ji1bb | ji1b | 9151 | 0 | 9 | 9 | 0.1700 | 0.1700 | 17 | 1.20 | 0.022698 | 0.022698 | 0.0272376 | FALSE |
| ji1bb | ji1b | 9151 | 0 | 10 | 10 | 0.1400 | 0.1400 | 14 | 2.10 | 0.015394 | 0.015394 | 0.0323270 | FALSE |
| ji1bc | ji1b | 9151 | 0 | 15 | 15 | 0.1000 | 0.1000 | 10 | 2.70 | 0.007854 | 0.007854 | 0.0212057 | FALSE |
| ji1bc | ji1b | 9151 | 0 | 14 | 14 | 0.2500 | 0.2500 | 25 | 2.20 | 0.049087 | 0.049087 | 0.1079922 | FALSE |
| ji1bc | ji1b | 9151 | 0 | 12 | 12 | 0.3900 | 0.2500 | 39 | 8.50 | 0.119459 | 0.049087 | 0.7163218 | FALSE |
| ji1bc | ji1b | 9151 | 0 | 13 | 13 | 0.3300 | 0.2600 | 33 | 7.30 | 0.085530 | 0.053093 | 0.5059727 | FALSE |
| ji1bc | ji1b | 9151 | 0 | 11 | 11 | 1.2000 | 1.2000 | 120 | 0.60 | 1.130972 | 1.130972 | 0.6785834 | TRUE |
| ji1be | ji1b | 9151 | 0 | 18 | 18 | 0.1100 | 0.1200 | 12 | 5.10 | 0.009503 | 0.011310 | 0.0530732 | FALSE |
| ji1be | ji1b | 9151 | 0 | 17 | 17 | 0.2200 | 0.2500 | 25 | 4.70 | 0.038013 | 0.049087 | 0.2046864 | FALSE |
| ji1be | ji1b | 9151 | 0 | 16 | 16 | 0.2200 | 0.1200 | 22 | 6.00 | 0.038013 | 0.011310 | 0.1479689 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 23 | 23 | 0.1100 | 0.1900 | 19 | 4.90 | 0.009503 | 0.028353 | 0.0927476 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 21 | 21 | 0.2300 | 0.1800 | 23 | 2.70 | 0.041548 | 0.025447 | 0.0904424 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 20 | 20 | 0.2000 | 0.2300 | 23 | 2.60 | 0.031416 | 0.041548 | 0.0948525 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 24 | 24 | 0.2600 | 0.3600 | 36 | 5.10 | 0.053093 | 0.101788 | 0.3949450 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 25 | 25 | 0.5000 | 1.6000 | 160 | 2.50 | 0.196349 | 2.010618 | 2.7587087 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 22 | 22 | 0.5400 | 0.4300 | 54 | 5.70 | 0.229022 | 0.145220 | 1.0665894 | FALSE |
| ji1bf | ji1b | 9151 | 0 | 19 | 19 | 0.4100 | 0.3400 | 41 | 2.20 | 0.132025 | 0.090792 | 0.2450990 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 31 | 31 | 0.0400 | 0.0000 | 4 | 13.40 | 0.001257 | 0.000000 | 0.0084195 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 28 | 28 | 0.1700 | 0.1200 | 17 | 4.00 | 0.022698 | 0.011310 | 0.0680154 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 27 | 27 | 0.1400 | 0.1600 | 16 | 2.60 | 0.015394 | 0.020106 | 0.0461500 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 26 | 26 | 0.1200 | 0.1600 | 16 | 3.60 | 0.011310 | 0.020106 | 0.0565486 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 30 | 30 | 0.1500 | 0.2500 | 25 | 4.90 | 0.017671 | 0.049087 | 0.1635590 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 29 | 29 | 0.1700 | 0.2000 | 20 | 4.90 | 0.022698 | 0.031416 | 0.1325790 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 32 | 32 | 0.1700 | 0.2000 | 20 | 4.80 | 0.022698 | 0.031416 | 0.1298733 | FALSE |
| ji1bg | ji1b | 9151 | 0 | 33 | 33 | 1.2000 | 0.5000 | 120 | 1.50 | 1.130972 | 0.196349 | 0.9954913 | TRUE |
| ji1bh | ji1b | 9151 | 0 | 37 | 37 | 0.1800 | 0.1800 | 18 | 2.80 | 0.025447 | 0.025447 | 0.0712513 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ji1bh | ji1b | 9151 | 0 | | 39 | 39 | 0.1600 | 0.1600 | 16 | 2.60 | 0.020106 | 0.020106 | 0.0522761 | FALSE |
| ji1bh | ji1b | 9151 | 0 | | 34 | 34 | 0.1000 | 0.1600 | 16 | 2.90 | 0.007854 | 0.020106 | 0.0405422 | FALSE |
| ji1bh | ji1b | 9151 | 0 | | 36 | 36 | 0.1400 | 0.0600 | 14 | 3.80 | 0.015394 | 0.002827 | 0.0346203 | FALSE |
| ji1bh | ji1b | 9151 | 0 | | 38 | 38 | 0.0900 | 0.1200 | 12 | 5.10 | 0.006362 | 0.011310 | 0.0450622 | FALSE |
| ji1bh | ji1b | 9151 | 0 | | 35 | 35 | 0.4400 | 0.5100 | 51 | 2.20 | 0.152053 | 0.204282 | 0.3919683 | FALSE |
| ji1bi | ji1b | 9151 | 0 | | 41 | 41 | 0.1100 | 0.1700 | 17 | 4.70 | 0.009503 | 0.022698 | 0.0756730 | FALSE |
| ji1bi | ji1b | 9151 | 0 | | 42 | 42 | 0.1100 | 0.0400 | 11 | 7.40 | 0.009503 | 0.001257 | 0.0398118 | FALSE |
| ji1bi | ji1b | 9151 | 0 | | 40 | 40 | 0.0400 | 0.1000 | 10 | 10.00 | 0.001257 | 0.007854 | 0.0455531 | FALSE |
| ji1bj | ji1b | 9151 | 0 | | 46 | 46 | 0.1100 | 0.1600 | 16 | 2.70 | 0.009503 | 0.020106 | 0.0399728 | FALSE |
| ji1bj | ji1b | 9151 | 0 | | 43 | 43 | 0.1100 | 0.0900 | 11 | 3.60 | 0.009503 | 0.006362 | 0.0285571 | FALSE |
| ji1bj | ji1b | 9151 | 0 | | 45 | 45 | 0.2500 | 0.2200 | 25 | 2.30 | 0.049087 | 0.038013 | 0.1001657 | FALSE |
| ji1bj | ji1b | 9151 | 0 | | 44 | 44 | 0.2300 | 0.2100 | 23 | 4.30 | 0.041548 | 0.034636 | 0.1637946 | FALSE |
| ny1aa | ny1a | 54353 | 0 | | 2 | 2 | 0.0900 | 0.0700 | 9 | 2.50 | 0.006362 | 0.003848 | 0.0127627 | FALSE |
| ny1aa | ny1a | 54353 | 0 | | 1 | 1 | 0.0700 | 0.1500 | 15 | 5.40 | 0.003848 | 0.017671 | 0.0581037 | FALSE |
| ny1ab | ny1a | 54353 | 0 | | 3 | 3 | 0.1000 | 0.1300 | 13 | 3.00 | 0.007854 | 0.013273 | 0.0316908 | FALSE |
| ny1ac | ny1a | 54353 | 0 | | 5 | 5 | 0.0900 | 0.1300 | 13 | 2.70 | 0.006362 | 0.013273 | 0.0265072 | FALSE |
| ny1ac | ny1a | 54353 | 0 | | 4 | 4 | 0.2800 | 0.1600 | 28 | 2.20 | 0.061575 | 0.020106 | 0.0898495 | FALSE |
| ny1ai | ny1a | 54353 | 0 | | 6 | 6 | 0.1500 | 0.0300 | 15 | 8.10 | 0.017671 | 0.000707 | 0.0744321 | FALSE |
| ny1aj | ny1a | 54353 | 0 | | 7 | 7 | 0.1500 | 0.0400 | 15 | 10.70 | 0.017671 | 0.001257 | 0.1012652 | FALSE |
| ny1ba | ny1b | 54353 | 0 | | 1 | 1 | 0.0700 | 0.3700 | 37 | 12.80 | 0.003848 | 0.107521 | 0.7127639 | TRUE |
| ny1bb | ny1b | 54353 | 0 | | 2 | 2 | 0.1000 | 0.0800 | 10 | 2.60 | 0.007854 | 0.005027 | 0.0167447 | FALSE |
| ny1bb | ny1b | 54353 | 0 | | 5 | 5 | 1.0000 | 1.5000 | 150 | 1.60 | 0.785398 | 1.767144 | 2.0420335 | FALSE |
| ny1bd | ny1b | 54353 | 0 | | 3 | 3 | 0.2400 | 0.1600 | 24 | 6.00 | 0.045239 | 0.020106 | 0.1960352 | FALSE |
| ny1bf | ny1b | 54353 | 0 | | 4 | 4 | 0.1300 | 0.0900 | 13 | 2.40 | 0.013273 | 0.006362 | 0.0235619 | FALSE |
| ol1ab | ol1a | 25429 | 0 | | 1 | 1 | 0.1800 | 0.1600 | 18 | 2.00 | 0.025447 | 0.020106 | 0.0455531 | FALSE |
| ol1ab | ol1a | 25429 | 0 | | 4 | 4 | 0.0800 | 0.1100 | 11 | 2.20 | 0.005027 | 0.009503 | 0.0159828 | FALSE |
| ol1ab | ol1a | 25429 | 0 | | 3 | 3 | 0.2400 | 0.1400 | 24 | 9.80 | 0.045239 | 0.015394 | 0.2971002 | TRUE |
| ol1ab | ol1a | 25429 | 0 | | 2 | 2 | 0.1000 | 0.3400 | 34 | 4.10 | 0.007854 | 0.090792 | 0.2022241 | TRUE |
| ol1ad | ol1a | 25429 | 0 | | 5 | 5 | 0.2700 | 0.1500 | 27 | 2.70 | 0.057255 | 0.017671 | 0.1011513 | FALSE |
| ol1ae | ol1a | 25429 | 0 | | 7 | 7 | 0.0900 | 0.1800 | 18 | 2.40 | 0.006362 | 0.025447 | 0.0381703 | FALSE |
| ol1ae | ol1a | 25429 | 0 | | 6 | 6 | 0.2300 | 0.1500 | 23 | 3.40 | 0.041548 | 0.017671 | 0.1006723 | TRUE |
| ol1ah | ol1a | 25429 | 0 | | 10 | 10 | 0.1300 | 0.1700 | 17 | 2.00 | 0.013273 | 0.022698 | 0.0359712 | FALSE |
| ol1ah | ol1a | 25429 | 0 | | 13 | 13 | 0.3700 | 0.0900 | 37 | 13.00 | 0.107521 | 0.006362 | 0.7402371 | TRUE |
| ol1ah | ol1a | 25429 | 0 | | 11 | 11 | 0.5000 | 2.0000 | 200 | 2.60 | 0.196349 | 3.141590 | 4.3393212 | TRUE |
| ol1ah | ol1a | 25429 | 0 | | 9 | 9 | 0.3700 | 0.5500 | 55 | 2.00 | 0.107521 | 0.237583 | 0.3451037 | FALSE |
| ol1ah | ol1a | 25429 | 0 | | 8 | 8 | 0.0700 | 0.4300 | 43 | 24.50 | 0.003848 | 0.145220 | 1.8260885 | TRUE |
| ol1ai | ol1a | 25429 | 0 | | 12 | 12 | 0.6700 | 0.6700 | 67 | 2.10 | 0.352565 | 0.352565 | 0.7403864 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 2 | 2 | 0.0800 | 0.1800 | 18 | 2.60 | 0.005027 | 0.025447 | 0.0396154 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 8 | 8 | 0.1400 | 0.0800 | 14 | 2.00 | 0.015394 | 0.005027 | 0.0204203 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 7 | 7 | 0.2800 | 0.2600 | 28 | 2.00 | 0.061575 | 0.053093 | 0.1146680 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 4 | 4 | 0.1700 | 0.2300 | 23 | 2.70 | 0.022698 | 0.041548 | 0.0867314 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 6 | 6 | 0.2800 | 0.3000 | 30 | 2.50 | 0.061575 | 0.070686 | 0.1653262 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 3 | 3 | 0.7200 | 0.1900 | 72 | 3.00 | 0.407150 | 0.028353 | 0.6532544 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 5 | 5 | 0.4700 | 0.3000 | 47 | 0.40 | 0.173494 | 0.070686 | 0.0488360 | FALSE |
| ol1ba | ol1b | 25429 | 0 | a | 1 | 1 | 0.4000 | 0.4100 | 41 | 6.40 | 0.125664 | 0.132025 | 0.8246045 | FALSE |
| ol1bc | ol1b | 25429 | 0 | | 12 | 12 | 0.1400 | 0.0700 | 14 | 6.50 | 0.015394 | 0.003848 | 0.0625373 | FALSE |
| ol1bc | ol1b | 25429 | 0 | | 10 | 10 | 0.1400 | 0.0100 | 14 | 9.60 | 0.015394 | 0.000079 | 0.0742672 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ol1bc | ol1b | 25429 | 0 | | 14 | 14 | 0.0700 | 0.1300 | 13 | 4.00 | 0.003848 | 0.013273 | 0.0342433 | FALSE |
| ol1bc | ol1b | 25429 | 0 | | 13 | 13 | 0.1100 | 0.0900 | 11 | 4.80 | 0.009503 | 0.006362 | 0.0380761 | FALSE |
| ol1bc | ol1b | 25429 | 0 | | 11 | 11 | 0.1100 | 0.0300 | 11 | 6.10 | 0.009503 | 0.000707 | 0.0311410 | FALSE |
| ol1bc | ol1b | 25429 | 0 | | 9 | 9 | 0.2100 | 0.0100 | 21 | 15.70 | 0.034636 | 0.000079 | 0.2725094 | FALSE |
| ol1be | ol1b | 25429 | 0 | | 16 | 16 | 0.1400 | 0.1100 | 14 | 2.90 | 0.015394 | 0.009503 | 0.0361008 | FALSE |
| ol1be | ol1b | 25429 | 0 | | 15 | 15 | 0.1900 | 0.2000 | 20 | 2.00 | 0.028353 | 0.031416 | 0.0597687 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 18 | 18 | 0.0700 | 0.1900 | 19 | 8.60 | 0.003848 | 0.028353 | 0.1384656 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 24 | 24 | 0.1800 | 0.1500 | 18 | 2.30 | 0.025447 | 0.017671 | 0.0495861 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 26 | 26 | 0.1800 | 0.0400 | 18 | 5.10 | 0.025447 | 0.001257 | 0.0680940 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 21 | 21 | 0.2100 | 0.0600 | 21 | 11.00 | 0.034636 | 0.002827 | 0.2060490 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 22 | 22 | 0.1100 | 0.2100 | 21 | 6.50 | 0.009503 | 0.034636 | 0.1434529 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 23 | 23 | 0.2000 | 0.3100 | 31 | 7.10 | 0.031416 | 0.075477 | 0.3794687 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 20 | 20 | 0.1400 | 0.3100 | 31 | 4.10 | 0.015394 | 0.075477 | 0.1862845 | FALSE |
| ol1bf | ol1b | 25429 | 0 | b | 19 | 19 | 1.0000 | 0.6000 | 100 | 2.40 | 0.785398 | 0.282743 | 1.2817687 | TRUE |
| ol1bf | ol1b | 25429 | 0 | b | 17 | 17 | 0.1400 | 0.4700 | 47 | 10.80 | 0.015394 | 0.173494 | 1.0199957 | TRUE |
| ol1bf | ol1b | 25429 | 0 | b | 25 | 25 | 0.4700 | 0.3300 | 47 | 6.40 | 0.173494 | 0.085530 | 0.8288771 | FALSE |
| ol1bg | ol1b | 25429 | 0 | | 27 | 27 | 0.2800 | 0.0200 | 28 | 14.20 | 0.061575 | 0.000314 | 0.4394142 | FALSE |
| ol1bi | ol1b | 25429 | 0 | | 28 | 28 | 0.0700 | 0.1100 | 11 | 3.70 | 0.003848 | 0.009503 | 0.0247008 | FALSE |
| ol1bj | ol1b | 25429 | 0 | | 29 | 29 | 0.2000 | 0.1500 | 20 | 2.60 | 0.031416 | 0.017671 | 0.0638135 | FALSE |
| ol1ca | ol1c | 25429 | 0 | | 3 | 3 | 0.0800 | 0.1500 | 15 | 4.00 | 0.005027 | 0.017671 | 0.0453960 | FALSE |
| ol1ca | ol1c | 25429 | 0 | | 6 | 6 | 0.1300 | 0.0600 | 13 | 2.70 | 0.013273 | 0.002827 | 0.0217359 | FALSE |
| ol1ca | ol1c | 25429 | 0 | | 5 | 5 | 0.2500 | 0.1800 | 25 | 3.00 | 0.049087 | 0.025447 | 0.1118013 | FALSE |
| ol1ca | ol1c | 25429 | 0 | | 2 | 2 | 0.3400 | 0.3800 | 38 | 3.70 | 0.090792 | 0.113411 | 0.3777762 | FALSE |
| ol1ca | ol1c | 25429 | 0 | | 4 | 4 | 2.0000 | 1.0000 | 200 | 2.30 | 3.141590 | 0.785398 | 4.5160356 | TRUE |
| ol1ca | ol1c | 25429 | 0 | | 1 | 1 | 0.7300 | 0.4500 | 73 | 11.30 | 0.418538 | 0.159043 | 3.2633345 | TRUE |
| ol1cb | ol1c | 25429 | 0 | | 7 | 7 | 0.0900 | 0.1100 | 11 | 5.00 | 0.006362 | 0.009503 | 0.0396626 | FALSE |
| ol1cb | ol1c | 25429 | 0 | | 12 | 12 | 0.2200 | 0.2300 | 23 | 2.50 | 0.038013 | 0.041548 | 0.0994510 | FALSE |
| ol1cb | ol1c | 25429 | 0 | | 13 | 13 | 0.1200 | 0.2100 | 21 | 2.90 | 0.011310 | 0.034636 | 0.0666213 | FALSE |
| ol1cb | ol1c | 25429 | 0 | | 8 | 8 | 0.1100 | 0.2100 | 21 | 2.60 | 0.009503 | 0.034636 | 0.0573811 | FALSE |
| ol1cb | ol1c | 25429 | 0 | | 11 | 11 | 0.3400 | 0.2200 | 34 | 3.90 | 0.090792 | 0.038013 | 0.2511701 | FALSE |
| ol1cb | ol1c | 25429 | 0 | | 10 | 10 | 0.6500 | 2.0000 | 200 | 2.00 | 0.331830 | 3.141590 | 3.4734204 | TRUE |
| ol1cb | ol1c | 25429 | 0 | | 9 | 9 | 0.4000 | 0.2400 | 40 | 7.60 | 0.125664 | 0.045239 | 0.6494295 | TRUE |
| ol1cc | ol1c | 25429 | 0 | | 15 | 15 | 0.1000 | 0.1800 | 18 | 2.30 | 0.007854 | 0.025447 | 0.0382960 | FALSE |
| ol1cc | ol1c | 25429 | 0 | | 14 | 14 | 0.2300 | 0.2400 | 24 | 4.00 | 0.041548 | 0.045239 | 0.1735728 | FALSE |
| ol1cc | ol1c | 25429 | 0 | | 16 | 16 | 0.0700 | 0.2300 | 23 | 5.70 | 0.003848 | 0.041548 | 0.1293785 | FALSE |
| ol1cd | ol1c | 25429 | 0 | | 18 | 18 | 0.2800 | 0.1100 | 28 | 3.10 | 0.061575 | 0.009503 | 0.1101716 | FALSE |
| ol1cd | ol1c | 25429 | 0 | | 17 | 17 | 0.2400 | 0.2000 | 24 | 2.10 | 0.045239 | 0.031416 | 0.0804875 | FALSE |
| ol1cf | ol1c | 25429 | 0 | | 20 | 20 | 2.0000 | 0.9000 | 200 | 3.40 | 3.141590 | 0.636172 | 6.4221954 | TRUE |
| ol1cf | ol1c | 25429 | 0 | | 19 | 19 | 0.5800 | 0.7900 | 79 | 6.00 | 0.264208 | 0.490167 | 2.2631229 | TRUE |
| ol1cg | ol1c | 25429 | 0 | | 21 | 21 | 0.2200 | 0.2500 | 25 | 6.00 | 0.038013 | 0.049087 | 0.2613017 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 29 | 29 | 0.1400 | 0.1700 | 17 | 2.60 | 0.015394 | 0.022698 | 0.0495193 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 27 | 27 | 0.1400 | 0.0400 | 14 | 6.60 | 0.015394 | 0.001257 | 0.0549464 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 30 | 30 | 0.1100 | 0.0300 | 11 | 4.80 | 0.009503 | 0.000707 | 0.0245044 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 22 | 22 | 0.2500 | 0.1900 | 25 | 4.50 | 0.049087 | 0.028353 | 0.1742404 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 28 | 28 | 0.2000 | 0.0400 | 20 | 10.30 | 0.031416 | 0.001257 | 0.1682636 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 23 | 23 | 0.3200 | 0.3200 | 32 | 2.30 | 0.080425 | 0.080425 | 0.1849768 | FALSE |
| ol1ci | ol1c | 25429 | 0 | | 26 | 26 | 0.2900 | 0.4700 | 47 | 7.70 | 0.066052 | 0.173494 | 0.9222530 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ol1cj | ol1c | 25429 | 0 | | 33 | 33 | 0.1100 | 0.0900 | 11 | 3.60 | 0.009503 | 0.006362 | 0.0285571 | FALSE |
| ol1cj | ol1c | 25429 | 0 | | 31 | 31 | 0.3900 | 0.1300 | 39 | 8.60 | 0.119459 | 0.013273 | 0.5707484 | FALSE |
| ol1cj | ol1c | 25429 | 0 | | 24 | 24 | 2.0000 | 0.0090 | 200 | 3.20 | 3.141590 | 0.000064 | 5.0266458 | TRUE |
| ol1cj | ol1c | 25429 | 0 | | 32 | 32 | 0.4200 | 0.1000 | 42 | 15.20 | 0.138544 | 0.007854 | 1.1126255 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 4 | 4 | 0.1800 | 0.1600 | 18 | 2.68 | 0.025447 | 0.020106 | 0.0610411 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 7 | 7 | 0.1500 | 0.1500 | 15 | 2.00 | 0.017671 | 0.017671 | 0.0353429 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 3 | 3 | 0.2200 | 0.1700 | 22 | 4.07 | 0.038013 | 0.022698 | 0.1235473 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 9 | 9 | 0.2000 | 0.0100 | 20 | 1.80 | 0.031416 | 0.000079 | 0.0283450 | TRUE |
| re1aa | re1a | 3982 | 0 | a | 6 | 6 | 0.2000 | 0.2000 | 20 | 2.00 | 0.031416 | 0.031416 | 0.0628318 | FALSE |
| re1aa | re1a | 3982 | 0 | | 1 | 1 | 0.3500 | 0.2900 | 35 | 7.50 | 0.096211 | 0.066052 | 0.6084867 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 2 | 2 | 0.3200 | 0.3500 | 35 | 3.97 | 0.080425 | 0.096211 | 0.3506223 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 5 | 5 | 0.3400 | 0.3400 | 34 | 2.09 | 0.090792 | 0.090792 | 0.1897552 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 8 | 8 | 0.5900 | 0.3700 | 59 | 3.10 | 0.273397 | 0.107521 | 0.5904226 | FALSE |
| re1aa | re1a | 3982 | 0 | a | 11 | 11 | 0.4300 | 0.0120 | 43 | 2.00 | 0.145220 | 0.000113 | 0.1453331 | TRUE |
| re1aa | re1a | 3982 | 0 | a | 10 | 10 | 0.4000 | 0.2300 | 40 | 6.40 | 0.125664 | 0.041548 | 0.5350756 | FALSE |
| re1ab | re1a | 3982 | 0 | | 14 | 14 | 1.0000 | 2.0000 | 200 | 2.70 | 0.785398 | 3.141590 | 5.3014331 | TRUE |
| re1ab | re1a | 3982 | 0 | | 13 | 13 | 0.1600 | 0.1600 | 16 | 2.00 | 0.020106 | 0.020106 | 0.0402124 | FALSE |
| re1ab | re1a | 3982 | 0 | | 12 | 12 | 0.3300 | 0.3200 | 33 | 2.90 | 0.085530 | 0.080425 | 0.2406340 | FALSE |
| re1ac | re1a | 3982 | 0 | | 17 | 17 | 0.6000 | 0.5000 | 60 | 1.10 | 0.282743 | 0.196349 | 0.2635009 | TRUE |
| re1ac | re1a | 3982 | 0 | | 15 | 15 | 0.2000 | 0.2200 | 22 | 5.90 | 0.031416 | 0.038013 | 0.2048160 | FALSE |
| re1ac | re1a | 3982 | 0 | | 18 | 18 | 0.2000 | 0.2000 | 20 | 3.30 | 0.031416 | 0.031416 | 0.1036725 | FALSE |
| re1ac | re1a | 3982 | 0 | | 19 | 19 | 0.2000 | 0.2000 | 20 | 3.30 | 0.031416 | 0.031416 | 0.1036725 | FALSE |
| re1ac | re1a | 3982 | 0 | | 16 | 16 | 0.4000 | 0.4000 | 40 | 1.90 | 0.125664 | 0.125664 | 0.2387608 | FALSE |
| re1ad | re1a | 3982 | 0 | | 30 | 30 | 0.1900 | 0.1800 | 19 | 3.30 | 0.028353 | 0.025447 | 0.0887696 | FALSE |
| re1ad | re1a | 3982 | 0 | | 22 | 22 | 0.1800 | 0.1800 | 18 | 2.30 | 0.025447 | 0.025447 | 0.0585278 | FALSE |
| re1ad | re1a | 3982 | 0 | | 29 | 29 | 0.1400 | 0.1000 | 14 | 2.50 | 0.015394 | 0.007854 | 0.0290597 | FALSE |
| re1ad | re1a | 3982 | 0 | | 23 | 23 | 0.1700 | 0.2900 | 29 | 9.80 | 0.022698 | 0.066052 | 0.4348746 | FALSE |
| re1ad | re1a | 3982 | 0 | | 27 | 27 | 0.2600 | 0.2400 | 26 | 3.50 | 0.053093 | 0.045239 | 0.1720806 | FALSE |
| re1ad | re1a | 3982 | 0 | | 21 | 21 | 0.2500 | 0.2500 | 25 | 2.30 | 0.049087 | 0.049087 | 0.1129009 | FALSE |
| re1ad | re1a | 3982 | 0 | | 28 | 28 | 0.2300 | 0.2100 | 23 | 3.80 | 0.041548 | 0.034636 | 0.1447488 | FALSE |
| re1ad | re1a | 3982 | 0 | | 25 | 25 | 0.1800 | 0.2000 | 20 | 3.50 | 0.025447 | 0.031416 | 0.0995099 | FALSE |
| re1ad | re1a | 3982 | 0 | | 24 | 24 | 0.3000 | 0.3000 | 30 | 5.40 | 0.070686 | 0.070686 | 0.3817032 | FALSE |
| re1ad | re1a | 3982 | 0 | | 20 | 20 | 0.6000 | 0.5800 | 60 | 6.80 | 0.282743 | 0.264208 | 1.8596328 | FALSE |
| re1ad | re1a | 3982 | 0 | | 26 | 26 | 0.4500 | 0.4000 | 45 | 4.30 | 0.159043 | 0.125664 | 0.6121192 | FALSE |
| re1ae | re1a | 3982 | 0 | | 35 | 35 | 0.2500 | 0.2500 | 25 | 2.20 | 0.049087 | 0.049087 | 0.1079922 | FALSE |
| re1ae | re1a | 3982 | 0 | | 32 | 32 | 0.1800 | 0.2200 | 22 | 2.00 | 0.025447 | 0.038013 | 0.0634601 | FALSE |
| re1ae | re1a | 3982 | 0 | | 31 | 31 | 0.3500 | 0.3000 | 35 | 7.90 | 0.096211 | 0.070686 | 0.6592430 | FALSE |
| re1ae | re1a | 3982 | 0 | | 36 | 36 | 0.9000 | 1.2000 | 120 | 1.80 | 0.636172 | 1.130972 | 1.5904299 | TRUE |
| re1ae | re1a | 3982 | 0 | | 34 | 34 | 0.9000 | 1.1500 | 115 | 2.00 | 0.636172 | 1.038688 | 1.6748602 | TRUE |
| re1ae | re1a | 3982 | 0 | | 33 | 33 | 0.4400 | 0.3600 | 44 | 4.90 | 0.152053 | 0.101788 | 0.6219092 | FALSE |
| re1af | re1a | 3982 | 0 | | 37 | 37 | 0.2200 | 0.3400 | 34 | 14.70 | 0.038013 | 0.090792 | 0.9467181 | FALSE |
| re1af | re1a | 3982 | 0 | | 38 | 38 | 0.8500 | 1.8000 | 180 | 1.80 | 0.567450 | 2.544688 | 2.8009238 | TRUE |
| re1af | re1a | 3982 | 0 | | 39 | 39 | 0.8500 | 1.8000 | 180 | 1.80 | 0.567450 | 2.544688 | 2.8009238 | FALSE |
| re1ag | re1a | 3982 | 0 | | 42 | 42 | 0.1700 | 0.1700 | 17 | 2.50 | 0.022698 | 0.022698 | 0.0567450 | FALSE |
| re1ag | re1a | 3982 | 0 | | 43 | 43 | 0.1400 | 0.1600 | 16 | 3.90 | 0.015394 | 0.020106 | 0.0692249 | FALSE |
| re1ag | re1a | 3982 | 0 | | 40 | 40 | 1.5000 | 2.0000 | 200 | 3.50 | 1.767144 | 3.141590 | 8.5902852 | TRUE |
| re1ag | re1a | 3982 | 0 | | 41 | 41 | 0.9200 | 0.7000 | 92 | 1.40 | 0.664760 | 0.384845 | 0.7347237 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| re1ah | re1a | 3982 | 0 | | 44 | 44 | 0.2400 | 0.3400 | 34 | 6.60 | 0.045239 | 0.090792 | 0.4489018 | FALSE |
| re1ah | re1a | 3982 | 0 | | 46 | 46 | 0.2800 | 0.3000 | 30 | 1.90 | 0.061575 | 0.070686 | 0.1256479 | FALSE |
| re1ah | re1a | 3982 | 0 | | 45 | 45 | 0.9000 | 0.6000 | 90 | 1.90 | 0.636172 | 0.282743 | 0.8729693 | TRUE |
| re1ai | re1a | 3982 | 0 | | 48 | 48 | 0.1600 | 0.2000 | 20 | 2.00 | 0.020106 | 0.031416 | 0.0515221 | FALSE |
| re1ai | re1a | 3982 | 0 | | 47 | 47 | 0.2800 | 0.3200 | 32 | 1.90 | 0.061575 | 0.080425 | 0.1348999 | FALSE |
| re1aj | re1a | 3982 | 0 | | 51 | 51 | 0.2600 | 0.2600 | 26 | 2.00 | 0.053093 | 0.053093 | 0.1061857 | FALSE |
| re1aj | re1a | 3982 | 0 | | 50 | 50 | 0.2400 | 0.2400 | 24 | 2.00 | 0.045239 | 0.045239 | 0.0904778 | FALSE |
| re1aj | re1a | 3982 | 0 | | 49 | 49 | 0.1700 | 0.2300 | 23 | 2.90 | 0.022698 | 0.041548 | 0.0931560 | FALSE |
| re1ba | re1b | 3982 | 0 | | 2 | 2 | 0.2300 | 0.1700 | 23 | 1.50 | 0.041548 | 0.022698 | 0.0481841 | FALSE |
| re1ba | re1b | 3982 | 0 | | 5 | 5 | 0.2000 | 0.1400 | 20 | 4.10 | 0.031416 | 0.015394 | 0.0959599 | FALSE |
| re1ba | re1b | 3982 | 0 | | 3 | 3 | 0.2000 | 0.1100 | 20 | 1.80 | 0.031416 | 0.009503 | 0.0368273 | FALSE |
| re1ba | re1b | 3982 | 0 | | 4 | 4 | 0.1600 | 0.2000 | 20 | 2.20 | 0.020106 | 0.031416 | 0.0566743 | FALSE |
| re1ba | re1b | 3982 | 0 | | 6 | 6 | 0.3600 | 0.3300 | 36 | 4.30 | 0.101788 | 0.085530 | 0.4027322 | FALSE |
| re1ba | re1b | 3982 | 0 | | 1 | 1 | 0.3100 | 0.3200 | 32 | 5.00 | 0.075477 | 0.080425 | 0.3897535 | FALSE |
| re1ba | re1b | 3982 | 0 | | 7 | 7 | 0.3100 | 0.2400 | 31 | 3.80 | 0.075477 | 0.045239 | 0.2293596 | FALSE |
| re1bb | re1b | 3982 | 0 | | 14 | 14 | 0.1700 | 0.1200 | 17 | 2.40 | 0.022698 | 0.011310 | 0.0408093 | FALSE |
| re1bb | re1b | 3982 | 0 | | 12 | 12 | 0.2300 | 0.1900 | 23 | 1.80 | 0.041548 | 0.028353 | 0.0629103 | FALSE |
| re1bb | re1b | 3982 | 0 | | 8 | 8 | 0.2000 | 0.2100 | 21 | 5.40 | 0.031416 | 0.034636 | 0.1783402 | FALSE |
| re1bb | re1b | 3982 | 0 | | 9 | 9 | 0.1600 | 0.2100 | 21 | 4.50 | 0.020106 | 0.034636 | 0.1231700 | FALSE |
| re1bb | re1b | 3982 | 0 | | 11 | 11 | 0.2000 | 0.2000 | 20 | 1.80 | 0.031416 | 0.031416 | 0.0565486 | FALSE |
| re1bb | re1b | 3982 | 0 | | 10 | 10 | 0.3500 | 0.2400 | 35 | 1.90 | 0.096211 | 0.045239 | 0.1343776 | FALSE |
| re1bb | re1b | 3982 | 0 | | 13 | 13 | 0.9000 | 0.7000 | 90 | 1.80 | 0.636172 | 0.384845 | 0.9189151 | TRUE |
| re1bc | re1b | 3982 | 0 | | 18 | 18 | 0.1800 | 0.1800 | 18 | 2.00 | 0.025447 | 0.025447 | 0.0508938 | FALSE |
| re1bc | re1b | 3982 | 0 | | 16 | 16 | 0.2300 | 0.2600 | 26 | 2.40 | 0.041548 | 0.053093 | 0.1135685 | FALSE |
| re1bc | re1b | 3982 | 0 | | 17 | 17 | 1.6000 | 2.0000 | 200 | 3.50 | 2.010618 | 3.141590 | 9.0163633 | TRUE |
| re1bc | re1b | 3982 | 0 | | 15 | 15 | 0.4800 | 0.4000 | 48 | 2.80 | 0.180956 | 0.125664 | 0.4292669 | FALSE |
| re1bd | re1b | 3982 | 0 | | 21 | 21 | 0.1800 | 0.1500 | 18 | 4.20 | 0.025447 | 0.017671 | 0.0905485 | FALSE |
| re1bd | re1b | 3982 | 0 | | 37 | 37 | 0.1300 | 0.1700 | 17 | 4.10 | 0.013273 | 0.022698 | 0.0737410 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 35 | 35 | 0.1400 | 0.1400 | 14 | 2.00 | 0.015394 | 0.015394 | 0.0307876 | FALSE |
| re1bd | re1b | 3982 | 0 | | 41 | 41 | 0.1400 | 0.1400 | 14 | 6.90 | 0.015394 | 0.015394 | 0.1062172 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 69 | 69 | 0.2900 | 0.2900 | 29 | 4.20 | 0.066052 | 0.066052 | 0.2774181 | FALSE |
| re1bd | re1b | 3982 | 0 | | 19 | 19 | 0.2800 | 0.2800 | 28 | 3.60 | 0.061575 | 0.061575 | 0.2216706 | FALSE |
| re1bd | re1b | 3982 | 0 | | 20 | 20 | 0.2800 | 0.2800 | 28 | 2.50 | 0.061575 | 0.061575 | 0.1539379 | FALSE |
| re1bd | re1b | 3982 | 0 | | 43 | 43 | 0.2700 | 0.2700 | 27 | 4.10 | 0.057255 | 0.057255 | 0.2347475 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 74 | 74 | 0.2500 | 0.2500 | 25 | 3.20 | 0.049087 | 0.049087 | 0.1570795 | FALSE |
| re1bd | re1b | 3982 | 0 | | 39 | 39 | 0.2400 | 0.2400 | 24 | 3.10 | 0.045239 | 0.045239 | 0.1402406 | FALSE |
| re1bd | re1b | 3982 | 0 | | 45 | 45 | 0.2400 | 0.2300 | 24 | 3.00 | 0.045239 | 0.041548 | 0.1301796 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 31 | 31 | 0.2400 | 0.2000 | 24 | 3.80 | 0.045239 | 0.031416 | 0.1456441 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 29 | 29 | 0.2200 | 0.2200 | 22 | 5.50 | 0.038013 | 0.038013 | 0.2090728 | FALSE |
| re1bd | re1b | 3982 | 0 | | 24 | 24 | 0.2100 | 0.2100 | 21 | 3.10 | 0.034636 | 0.034636 | 0.1073717 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 34 | 34 | 0.2000 | 0.2000 | 20 | 2.00 | 0.031416 | 0.031416 | 0.0628318 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 67 | 67 | 0.2000 | 0.2000 | 20 | 2.00 | 0.031416 | 0.031416 | 0.0628318 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 30 | 30 | 0.3500 | 0.3500 | 35 | 2.50 | 0.096211 | 0.096211 | 0.2405280 | FALSE |
| re1bd | re1b | 3982 | 0 | | 26 | 26 | 0.3300 | 0.2800 | 33 | 2.00 | 0.085530 | 0.061575 | 0.1471050 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 71 | 71 | 0.3000 | 0.3000 | 30 | 6.50 | 0.070686 | 0.070686 | 0.4594575 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 73 | 73 | 2.2000 | 0.9000 | 220 | 2.00 | 3.801324 | 0.636172 | 4.4374959 | TRUE |
| re1bd | re1b | 3982 | 0 | | 38 | 38 | 0.6300 | 0.6300 | 63 | 5.00 | 0.311724 | 0.311724 | 1.5586213 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| re1bd | re1b | 3982 | 0 | b | 70 | 70 | 0.6000 | 0.6000 | 60 | 6.70 | 0.282743 | 0.282743 | 1.8943788 | FALSE |
| re1bd | re1b | 3982 | 0 | | 42 | 42 | 0.5100 | 0.5100 | 51 | 2.80 | 0.204282 | 0.204282 | 0.5719893 | FALSE |
| re1bd | re1b | 3982 | 0 | | 25 | 25 | 0.5000 | 0.4000 | 50 | 3.30 | 0.196349 | 0.125664 | 0.5313214 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 36 | 36 | 0.4000 | 0.5000 | 50 | 5.40 | 0.125664 | 0.196349 | 0.8694350 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 66 | 66 | 0.4800 | 0.4800 | 48 | 4.80 | 0.180956 | 0.180956 | 0.8685868 | FALSE |
| re1bd | re1b | 3982 | 0 | | 22 | 22 | 0.4400 | 0.4800 | 48 | 2.20 | 0.152053 | 0.180956 | 0.3663094 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 28 | 28 | 0.4500 | 0.4700 | 47 | 7.10 | 0.159043 | 0.173494 | 1.1805074 | FALSE |
| re1bd | re1b | 3982 | 0 | | 44 | 44 | 0.4500 | 0.4400 | 45 | 5.90 | 0.159043 | 0.152053 | 0.9177331 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 68 | 68 | 0.4400 | 0.4400 | 44 | 4.50 | 0.152053 | 0.152053 | 0.6842383 | FALSE |
| re1bd | re1b | 3982 | 0 | | 40 | 40 | 0.4200 | 0.4000 | 42 | 4.20 | 0.138544 | 0.125664 | 0.5548362 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 27 | 27 | 0.3700 | 0.4200 | 42 | 9.40 | 0.107521 | 0.138544 | 1.1565057 | FALSE |
| re1bd | re1b | 3982 | 0 | | 23 | 23 | 0.3600 | 0.4200 | 42 | 7.00 | 0.101788 | 0.138544 | 0.8411607 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 32 | 32 | 0.4000 | 0.4000 | 40 | 3.30 | 0.125664 | 0.125664 | 0.4146899 | FALSE |
| re1bd | re1b | 3982 | 0 | a | 33 | 33 | 0.4000 | 0.4000 | 40 | 3.80 | 0.125664 | 0.125664 | 0.4775217 | FALSE |
| re1bd | re1b | 3982 | 0 | b | 72 | 72 | 0.3800 | 0.4000 | 40 | 4.60 | 0.113411 | 0.125664 | 0.5498725 | FALSE |
| re1be | re1b | 3982 | 0 | b | 53 | 53 | 0.1800 | 0.1500 | 18 | 2.00 | 0.025447 | 0.017671 | 0.0431183 | FALSE |
| re1be | re1b | 3982 | 0 | | 77 | 77 | 0.1300 | 0.0800 | 13 | 3.50 | 0.013273 | 0.005027 | 0.0320246 | FALSE |
| re1be | re1b | 3982 | 0 | | 76 | 76 | 0.1000 | 0.1000 | 10 | 3.20 | 0.007854 | 0.007854 | 0.0251327 | FALSE |
| re1be | re1b | 3982 | 0 | b | 49 | 49 | 0.2900 | 0.2900 | 29 | 2.40 | 0.066052 | 0.066052 | 0.1585246 | FALSE |
| re1be | re1b | 3982 | 0 | b | 50 | 50 | 0.2900 | 0.2900 | 29 | 3.30 | 0.066052 | 0.066052 | 0.2179714 | FALSE |
| re1be | re1b | 3982 | 0 | b | 56 | 56 | 0.2800 | 0.2600 | 28 | 2.80 | 0.061575 | 0.053093 | 0.1605352 | FALSE |
| re1be | re1b | 3982 | 0 | | 78 | 78 | 0.2200 | 0.1700 | 22 | 3.40 | 0.038013 | 0.022698 | 0.1032091 | FALSE |
| re1be | re1b | 3982 | 0 | b | 62 | 62 | 0.2000 | 0.2000 | 20 | 4.00 | 0.031416 | 0.031416 | 0.1256636 | FALSE |
| re1be | re1b | 3982 | 0 | b | 55 | 55 | 0.3800 | 0.3500 | 38 | 3.30 | 0.113411 | 0.096211 | 0.3458773 | FALSE |
| re1be | re1b | 3982 | 0 | b | 57 | 57 | 0.3600 | 0.3600 | 36 | 5.40 | 0.101788 | 0.101788 | 0.5496526 | FALSE |
| re1be | re1b | 3982 | 0 | b | 65 | 65 | 0.3200 | 0.3200 | 32 | 2.70 | 0.080425 | 0.080425 | 0.2171467 | FALSE |
| re1be | re1b | 3982 | 0 | b | 46 | 46 | 0.3100 | 0.2800 | 31 | 12.20 | 0.075477 | 0.061575 | 0.8360164 | FALSE |
| re1be | re1b | 3982 | 0 | b | 58 | 58 | 0.3000 | 0.3000 | 30 | 3.50 | 0.070686 | 0.070686 | 0.2474002 | FALSE |
| re1be | re1b | 3982 | 0 | b | 59 | 59 | 0.3000 | 0.3000 | 30 | 1.90 | 0.070686 | 0.070686 | 0.1343030 | FALSE |
| re1be | re1b | 3982 | 0 | b | 63 | 63 | 0.3000 | 0.3000 | 30 | 2.60 | 0.070686 | 0.070686 | 0.1837830 | FALSE |
| re1be | re1b | 3982 | 0 | b | 64 | 64 | 0.3000 | 0.3000 | 30 | 3.70 | 0.070686 | 0.070686 | 0.2615374 | FALSE |
| re1be | re1b | 3982 | 0 | b | 75 | 75 | 1.9000 | 1.8000 | 190 | 2.50 | 2.835285 | 2.544688 | 6.7249661 | TRUE |
| re1be | re1b | 3982 | 0 | b | 54 | 54 | 0.5500 | 0.5500 | 55 | 9.50 | 0.237583 | 0.237583 | 2.2570361 | FALSE |
| re1be | re1b | 3982 | 0 | b | 48 | 48 | 0.5200 | 0.5200 | 52 | 2.50 | 0.212371 | 0.212371 | 0.5309287 | FALSE |
| re1be | re1b | 3982 | 0 | b | 60 | 60 | 0.5200 | 0.5200 | 52 | 6.90 | 0.212371 | 0.212371 | 1.4653632 | FALSE |
| re1be | re1b | 3982 | 0 | b | 47 | 47 | 0.5000 | 0.5000 | 50 | 6.30 | 0.196349 | 0.196349 | 1.2370011 | FALSE |
| re1be | re1b | 3982 | 0 | b | 51 | 51 | 0.4800 | 0.4800 | 48 | 6.00 | 0.180956 | 0.180956 | 1.0857335 | FALSE |
| re1be | re1b | 3982 | 0 | b | 61 | 61 | 0.4000 | 0.4000 | 40 | 7.10 | 0.125664 | 0.125664 | 0.8922116 | FALSE |
| re1be | re1b | 3982 | 0 | b | 52 | 52 | 0.4000 | 0.3000 | 40 | 3.00 | 0.125664 | 0.070686 | 0.2945241 | FALSE |
| re1bf | re1b | 3982 | 0 | | 86 | 86 | 0.1100 | 0.1100 | 11 | 1.90 | 0.009503 | 0.009503 | 0.0180563 | FALSE |
| re1bf | re1b | 3982 | 0 | | 82 | 82 | 0.2500 | 0.2300 | 25 | 1.80 | 0.049087 | 0.041548 | 0.0815714 | FALSE |
| re1bf | re1b | 3982 | 0 | | 84 | 84 | 0.3500 | 0.3500 | 35 | 2.00 | 0.096211 | 0.096211 | 0.1924224 | FALSE |
| re1bf | re1b | 3982 | 0 | | 80 | 80 | 0.3300 | 0.3000 | 33 | 3.10 | 0.085530 | 0.070686 | 0.2421341 | FALSE |
| re1bf | re1b | 3982 | 0 | | 85 | 85 | 0.3100 | 0.3100 | 31 | 2.00 | 0.075477 | 0.075477 | 0.1509534 | FALSE |
| re1bf | re1b | 3982 | 0 | | 81 | 81 | 0.3100 | 0.2100 | 31 | 2.00 | 0.075477 | 0.034636 | 0.1101127 | FALSE |
| re1bf | re1b | 3982 | 0 | | 83 | 83 | 1.0000 | 0.8000 | 100 | 1.50 | 0.785398 | 0.502654 | 0.9660389 | TRUE |
| re1bf | re1b | 3982 | 0 | | 79 | 79 | 0.8000 | 0.4200 | 80 | 6.60 | 0.502654 | 0.138544 | 2.1159551 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| re1bg | re1b | 3982 | 0 | c | 93 | 93 | 0.1700 | 0.1800 | 18 | 2.80 | 0.022698 | 0.025447 | 0.0674028 | FALSE |
| re1bg | re1b | 3982 | 0 | c | 95 | 95 | 0.1500 | 0.1800 | 18 | 2.30 | 0.017671 | 0.025447 | 0.0495861 | FALSE |
| re1bg | re1b | 3982 | 0 | | 99 | 99 | 0.1100 | 0.1200 | 12 | 2.10 | 0.009503 | 0.011310 | 0.0218537 | FALSE |
| re1bg | re1b | 3982 | 0 | | 89 | 89 | 0.2500 | 0.2500 | 25 | 3.30 | 0.049087 | 0.049087 | 0.1619882 | FALSE |
| re1bg | re1b | 3982 | 0 | c | 102 | 102 | 0.2400 | 0.1700 | 24 | 3.10 | 0.045239 | 0.022698 | 0.1053022 | FALSE |
| re1bg | re1b | 3982 | 0 | c | 94 | 94 | 0.2100 | 0.2300 | 23 | 4.40 | 0.034636 | 0.041548 | 0.1676038 | FALSE |
| re1bg | re1b | 3982 | 0 | | 97 | 97 | 0.2200 | 0.1900 | 22 | 3.60 | 0.038013 | 0.028353 | 0.1194590 | FALSE |
| re1bg | re1b | 3982 | 0 | c | 92 | 92 | 0.2000 | 0.2000 | 20 | 2.60 | 0.031416 | 0.031416 | 0.0816813 | FALSE |
| re1bg | re1b | 3982 | 0 | | 100 | 100 | 1.1000 | 0.7000 | 110 | 1.00 | 0.950331 | 0.384845 | 0.6675879 | TRUE |
| re1bg | re1b | 3982 | 0 | | 96 | 96 | 0.7000 | 1.0000 | 100 | 1.50 | 0.384845 | 0.785398 | 0.8776817 | TRUE |
| re1bg | re1b | 3982 | 0 | c | 90 | 90 | 0.6000 | 0.6200 | 62 | 3.50 | 0.282743 | 0.301907 | 1.0231373 | FALSE |
| re1bg | re1b | 3982 | 0 | | 88 | 88 | 0.5300 | 0.3700 | 53 | 3.00 | 0.220618 | 0.107521 | 0.4922086 | FALSE |
| re1bg | re1b | 3982 | 0 | | 87 | 87 | 0.3800 | 0.4700 | 47 | 3.90 | 0.113411 | 0.173494 | 0.5594661 | FALSE |
| re1bg | re1b | 3982 | 0 | c | 91 | 91 | 0.4400 | 0.4500 | 45 | 3.80 | 0.152053 | 0.159043 | 0.5910823 | FALSE |
| re1bg | re1b | 3982 | 0 | c | 101 | 101 | 0.3300 | 0.4200 | 42 | 8.20 | 0.085530 | 0.138544 | 0.9187030 | FALSE |
| re1bg | re1b | 3982 | 0 | | 98 | 98 | 0.3800 | 0.4000 | 40 | 2.20 | 0.113411 | 0.125664 | 0.2629825 | FALSE |
| re1bh | re1b | 3982 | 0 | c | 107 | 107 | 0.2800 | 0.2800 | 28 | 3.30 | 0.061575 | 0.061575 | 0.2031980 | FALSE |
| re1bh | re1b | 3982 | 0 | c | 106 | 106 | 0.1700 | 0.2400 | 24 | 4.30 | 0.022698 | 0.045239 | 0.1460643 | FALSE |
| re1bh | re1b | 3982 | 0 | c | 103 | 103 | 0.1800 | 0.2200 | 22 | 2.30 | 0.025447 | 0.038013 | 0.0729791 | FALSE |
| re1bh | re1b | 3982 | 0 | c | 105 | 105 | 0.2900 | 0.3000 | 30 | 2.10 | 0.066052 | 0.070686 | 0.1435746 | FALSE |
| re1bh | re1b | 3982 | 0 | c | 104 | 104 | 0.4200 | 0.3900 | 42 | 3.20 | 0.138544 | 0.119459 | 0.4128049 | FALSE |
| re1bi | re1b | 3982 | 0 | | 111 | 111 | 0.1000 | 0.1000 | 10 | 2.20 | 0.007854 | 0.007854 | 0.0172787 | FALSE |
| re1bi | re1b | 3982 | 0 | | 115 | 115 | 0.2300 | 0.2800 | 28 | 7.50 | 0.041548 | 0.061575 | 0.3867101 | FALSE |
| re1bi | re1b | 3982 | 0 | | 110 | 110 | 0.2700 | 0.2000 | 27 | 2.90 | 0.057255 | 0.031416 | 0.1285735 | FALSE |
| re1bi | re1b | 3982 | 0 | | 119 | 119 | 0.2400 | 0.2300 | 24 | 4.90 | 0.045239 | 0.041548 | 0.2126267 | FALSE |
| re1bi | re1b | 3982 | 0 | | 113 | 113 | 0.2400 | 0.2200 | 24 | 4.90 | 0.045239 | 0.038013 | 0.2039677 | FALSE |
| re1bi | re1b | 3982 | 0 | | 109 | 109 | 0.2300 | 0.2300 | 23 | 2.40 | 0.041548 | 0.041548 | 0.0997141 | FALSE |
| re1bi | re1b | 3982 | 0 | | 120 | 120 | 0.3600 | 0.3600 | 36 | 2.10 | 0.101788 | 0.101788 | 0.2137538 | FALSE |
| re1bi | re1b | 3982 | 0 | | 121 | 121 | 0.3500 | 0.3600 | 36 | 2.00 | 0.096211 | 0.101788 | 0.1979987 | FALSE |
| re1bi | re1b | 3982 | 0 | | 118 | 118 | 0.2500 | 0.3000 | 30 | 2.00 | 0.049087 | 0.070686 | 0.1197731 | FALSE |
| re1bi | re1b | 3982 | 0 | | 108 | 108 | 1.5000 | 1.7000 | 170 | 2.60 | 1.767144 | 2.269799 | 5.2480261 | TRUE |
| re1bi | re1b | 3982 | 0 | | 114 | 114 | 0.4000 | 0.5200 | 52 | 7.50 | 0.125664 | 0.212371 | 1.2676316 | FALSE |
| re1bi | re1b | 3982 | 0 | | 116 | 116 | 0.4500 | 0.4900 | 49 | 6.70 | 0.159043 | 0.188574 | 1.1645167 | FALSE |
| re1bi | re1b | 3982 | 0 | | 117 | 117 | 0.4000 | 0.4000 | 40 | 3.90 | 0.125664 | 0.125664 | 0.4900880 | FALSE |
| re1bi | re1b | 3982 | 0 | | 112 | 112 | 0.4000 | 0.3500 | 40 | 8.90 | 0.125664 | 0.096211 | 0.9873428 | FALSE |
| re1bj | re1b | 3982 | 0 | | 122 | 122 | 0.1400 | 0.1400 | 14 | 2.00 | 0.015394 | 0.015394 | 0.0307876 | FALSE |
| re1bj | re1b | 3982 | 0 | | 123 | 123 | 0.1300 | 0.1100 | 13 | 2.10 | 0.013273 | 0.009503 | 0.0239154 | FALSE |
| wh1aa | wh1a | 24296 | 0 | | 2 | 2 | 0.0700 | 0.1900 | 19 | 10.00 | 0.003848 | 0.028353 | 0.1610065 | FALSE |
| wh1aa | wh1a | 24296 | 0 | | 3 | 3 | 0.1800 | 0.0200 | 18 | 9.80 | 0.025447 | 0.000314 | 0.1262291 | FALSE |
| wh1aa | wh1a | 24296 | 0 | | 5 | 5 | 0.1500 | 0.1600 | 16 | 2.00 | 0.017671 | 0.020106 | 0.0377776 | FALSE |
| wh1aa | wh1a | 24296 | 0 | | 1 | 1 | 0.1100 | 0.1500 | 15 | 4.90 | 0.009503 | 0.017671 | 0.0665781 | FALSE |
| wh1aa | wh1a | 24296 | 0 | | 4 | 4 | 0.0500 | 0.2300 | 23 | 14.80 | 0.001963 | 0.041548 | 0.3219816 | FALSE |
| wh1aa | wh1a | 24296 | 0 | | 6 | 6 | 0.2100 | 0.0400 | 21 | 12.90 | 0.034636 | 0.001257 | 0.2315077 | FALSE |
| wh1ab | wh1a | 24296 | 0 | | 7 | 7 | 0.1800 | 0.0600 | 18 | 14.00 | 0.025447 | 0.002827 | 0.1979202 | FALSE |
| wh1ab | wh1a | 24296 | 0 | | 9 | 9 | 0.1400 | 0.1400 | 14 | 1.90 | 0.015394 | 0.015394 | 0.0292482 | FALSE |
| wh1ab | wh1a | 24296 | 0 | | 8 | 8 | 0.2200 | 0.1600 | 22 | 11.60 | 0.038013 | 0.020106 | 0.3370926 | FALSE |
| wh1ac | wh1a | 24296 | 0 | | 12 | 12 | 0.1600 | 0.1100 | 16 | 2.00 | 0.020106 | 0.009503 | 0.0296095 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| wh1ac | wh1a | 24296 | 0 | 11 | 11 | 0.1500 | 0.0800 | 15 | 5.70 | 0.017671 | 0.005027 | 0.0646893 | FALSE |
| wh1ac | wh1a | 24296 | 0 | 14 | 14 | 0.0600 | 0.1200 | 12 | 5.00 | 0.002827 | 0.011310 | 0.0353429 | FALSE |
| wh1ac | wh1a | 24296 | 0 | 13 | 13 | 0.1800 | 0.2400 | 24 | 6.70 | 0.025447 | 0.045239 | 0.2367973 | FALSE |
| wh1ac | wh1a | 24296 | 0 | 10 | 10 | 0.2200 | 0.0900 | 22 | 4.80 | 0.038013 | 0.006362 | 0.1064999 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 15 | 15 | 0.1600 | 0.1600 | 16 | 6.80 | 0.020106 | 0.020106 | 0.1367220 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 16 | 16 | 0.1600 | 0.1600 | 16 | 4.20 | 0.020106 | 0.020106 | 0.0844459 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 20 | 20 | 0.1200 | 0.1400 | 14 | 2.00 | 0.011310 | 0.015394 | 0.0267035 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 30 | 30 | 0.0700 | 0.1300 | 13 | 5.30 | 0.003848 | 0.013273 | 0.0453724 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 18 | 18 | 0.0700 | 0.2400 | 24 | 3.50 | 0.003848 | 0.045239 | 0.0859029 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 19 | 19 | 0.2300 | 0.2200 | 23 | 8.70 | 0.041548 | 0.038013 | 0.3460893 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 17 | 17 | 0.2000 | 0.2300 | 23 | 3.10 | 0.031416 | 0.041548 | 0.1130933 | FALSE |
| wh1ad | wh1a | 24296 | 0 | 29 | 29 | 0.3400 | 0.3400 | 34 | 2.00 | 0.090792 | 0.090792 | 0.1815839 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 31 | 31 | 0.1800 | 0.1900 | 19 | 2.60 | 0.025447 | 0.028353 | 0.0699396 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 25 | 25 | 0.1800 | 0.0300 | 18 | 13.40 | 0.025447 | 0.000707 | 0.1752300 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 24 | 24 | 0.0900 | 0.1100 | 11 | 4.20 | 0.006362 | 0.009503 | 0.0333166 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 34 | 34 | 0.0600 | 0.1000 | 10 | 4.00 | 0.002827 | 0.007854 | 0.0213628 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 35 | 35 | 0.2900 | 0.2000 | 29 | 3.00 | 0.066052 | 0.031416 | 0.1462017 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 26 | 26 | 0.2300 | 0.1700 | 23 | 8.00 | 0.041548 | 0.022698 | 0.2569821 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 22 | 22 | 0.2200 | 0.1800 | 22 | 2.40 | 0.038013 | 0.025447 | 0.0761521 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 27 | 27 | 0.2000 | 0.1900 | 20 | 3.50 | 0.031416 | 0.028353 | 0.1045953 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 23 | 23 | 0.2000 | 0.1800 | 20 | 2.40 | 0.031416 | 0.025447 | 0.0682353 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 21 | 21 | 0.2300 | 0.3400 | 34 | 3.80 | 0.041548 | 0.090792 | 0.2514450 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 28 | 28 | 0.3100 | 0.0700 | 31 | 16.40 | 0.075477 | 0.003848 | 0.6504662 | FALSE |
| wh1ae | wh1a | 24296 | 0 | 32 | 32 | 0.3500 | 0.5600 | 56 | 4.80 | 0.096211 | 0.246301 | 0.8220284 | TRUE |
| wh1af | wh1a | 24296 | 0 | 36 | 36 | 0.1400 | 0.1700 | 17 | 7.70 | 0.015394 | 0.022698 | 0.1466533 | FALSE |
| wh1af | wh1a | 24296 | 0 | 40 | 40 | 0.0500 | 0.1300 | 13 | 8.20 | 0.001963 | 0.013273 | 0.0624705 | FALSE |
| wh1af | wh1a | 24296 | 0 | 37 | 37 | 0.1100 | 0.1200 | 12 | 3.10 | 0.009503 | 0.011310 | 0.0322602 | FALSE |
| wh1af | wh1a | 24296 | 0 | 38 | 38 | 0.1800 | 0.2300 | 23 | 3.00 | 0.025447 | 0.041548 | 0.1004916 | FALSE |
| wh1af | wh1a | 24296 | 0 | 39 | 39 | 0.2100 | 0.1900 | 21 | 2.90 | 0.034636 | 0.028353 | 0.0913339 | FALSE |
| wh1ag | wh1a | 24296 | 0 | 42 | 42 | 0.0400 | 0.1200 | 12 | 7.10 | 0.001257 | 0.011310 | 0.0446106 | FALSE |
| wh1ag | wh1a | 24296 | 0 | 41 | 41 | 0.1000 | 0.3600 | 36 | 16.70 | 0.007854 | 0.101788 | 0.9155064 | FALSE |
| wh1ah | wh1a | 24296 | 0 | 47 | 47 | 0.1300 | 0.1700 | 17 | 2.40 | 0.013273 | 0.022698 | 0.0431654 | FALSE |
| wh1ah | wh1a | 24296 | 0 | 45 | 45 | 0.2900 | 0.1700 | 29 | 12.20 | 0.066052 | 0.022698 | 0.5413745 | FALSE |
| wh1ah | wh1a | 24296 | 0 | 44 | 44 | 0.2700 | 0.1500 | 27 | 9.30 | 0.057255 | 0.017671 | 0.3484102 | FALSE |
| wh1ah | wh1a | 24296 | 0 | 46 | 46 | 0.1300 | 0.3400 | 34 | 17.00 | 0.013273 | 0.090792 | 0.8845539 | FALSE |
| wh1ah | wh1a | 24296 | 0 | 33 | 33 | 0.0600 | 0.5400 | 54 | 27.80 | 0.002827 | 0.229022 | 3.2227059 | FALSE |
| wh1ah | wh1a | 24296 | 0 | 48 | 48 | 0.4000 | 0.4500 | 45 | 5.60 | 0.125664 | 0.159043 | 0.7971785 | FALSE |
| wh1ai | wh1a | 24296 | 0 | 49 | 49 | 0.1900 | 0.0600 | 19 | 13.90 | 0.028353 | 0.002827 | 0.2167030 | FALSE |
| wh1ai | wh1a | 24296 | 0 | 51 | 51 | 0.1700 | 0.1700 | 17 | 4.50 | 0.022698 | 0.022698 | 0.1021409 | FALSE |
| wh1ai | wh1a | 24296 | 0 | 56 | 56 | 0.1300 | 0.1200 | 13 | 2.00 | 0.013273 | 0.011310 | 0.0245829 | FALSE |
| wh1ai | wh1a | 24296 | 0 | 50 | 50 | 0.1100 | 0.0600 | 11 | 5.90 | 0.009503 | 0.002827 | 0.0363757 | FALSE |
| wh1ai | wh1a | 24296 | 0 | 43 | 43 | 0.0100 | 0.2200 | 22 | 20.00 | 0.000079 | 0.038013 | 0.3809178 | FALSE |
| wh1ai | wh1a | 24296 | 0 | 55 | 55 | 0.0700 | 0.2000 | 20 | 12.30 | 0.003848 | 0.031416 | 0.2168757 | FALSE |
| wh1aj | wh1a | 24296 | 0 | 54 | 54 | 0.0900 | 0.1200 | 12 | 3.70 | 0.006362 | 0.011310 | 0.0326922 | FALSE |
| wh1aj | wh1a | 24296 | 0 | 53 | 53 | 0.2000 | 0.2200 | 22 | 4.80 | 0.031416 | 0.038013 | 0.1666299 | FALSE |
| wh1aj | wh1a | 24296 | 0 | 52 | 52 | 0.1800 | 0.2200 | 22 | 7.00 | 0.025447 | 0.038013 | 0.2221104 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 18 | 18 | 0.1500 | 0.1900 | 19 | 7.20 | 0.017671 | 0.028353 | 0.1656875 | FALSE |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| wh1ba | wh1b | 24296 | 0 | 2 | 2 | 0.0500 | 0.1700 | 17 | 9.00 | 0.001963 | 0.022698 | 0.1109767 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 15 | 15 | 0.1600 | 0.1100 | 16 | 2.80 | 0.020106 | 0.009503 | 0.0414533 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 9 | 9 | 0.1500 | 0.1500 | 15 | 7.90 | 0.017671 | 0.017671 | 0.1396044 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 7 | 7 | 0.1300 | 0.1500 | 15 | 2.00 | 0.013273 | 0.017671 | 0.0309447 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 6 | 6 | 0.1100 | 0.1400 | 14 | 2.40 | 0.009503 | 0.015394 | 0.0298765 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 16 | 16 | 0.0900 | 0.1400 | 14 | 8.10 | 0.006362 | 0.015394 | 0.0881098 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 11 | 11 | 0.0400 | 0.1300 | 13 | 6.20 | 0.001257 | 0.013273 | 0.0450425 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 8 | 8 | 0.2500 | 0.2000 | 25 | 4.30 | 0.049087 | 0.031416 | 0.1730820 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 19 | 19 | 0.1900 | 0.2400 | 24 | 4.20 | 0.028353 | 0.045239 | 0.1545427 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 10 | 10 | 0.2200 | 0.1000 | 22 | 9.50 | 0.038013 | 0.007854 | 0.2178693 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 13 | 13 | 0.2100 | 0.2100 | 21 | 2.70 | 0.034636 | 0.034636 | 0.0935173 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 12 | 12 | 0.2000 | 0.1500 | 20 | 6.50 | 0.031416 | 0.017671 | 0.1595339 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 14 | 14 | 0.3500 | 0.3500 | 35 | 2.00 | 0.096211 | 0.096211 | 0.1924224 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 3 | 3 | 0.2700 | 0.3500 | 35 | 7.50 | 0.057255 | 0.096211 | 0.5755000 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 1 | 1 | 0.1700 | 0.3100 | 31 | 5.00 | 0.022698 | 0.075477 | 0.2454367 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 4 | 4 | 0.3000 | 0.1700 | 30 | 7.50 | 0.070686 | 0.022698 | 0.3501891 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 5 | 5 | 0.2700 | 0.3000 | 30 | 8.50 | 0.057255 | 0.070686 | 0.5437503 | FALSE |
| wh1ba | wh1b | 24296 | 0 | 17 | 17 | 0.5800 | 0.5800 | 58 | 3.20 | 0.264208 | 0.264208 | 0.8454647 | FALSE |
| wh1bb | wh1b | 24296 | 0 | 23 | 23 | 0.1200 | 0.0900 | 12 | 2.50 | 0.011310 | 0.006362 | 0.0220893 | FALSE |
| wh1bb | wh1b | 24296 | 0 | 29 | 29 | 0.2000 | 0.2800 | 28 | 6.00 | 0.031416 | 0.061575 | 0.2789732 | FALSE |
| wh1bb | wh1b | 24296 | 0 | 20 | 20 | 0.2500 | 0.1800 | 25 | 6.00 | 0.049087 | 0.025447 | 0.2236027 | FALSE |
| wh1bb | wh1b | 24296 | 0 | 21 | 21 | 0.2100 | 0.0900 | 21 | 9.50 | 0.034636 | 0.006362 | 0.1947393 | FALSE |
| wh1bb | wh1b | 24296 | 0 | 24 | 24 | 0.2100 | 0.0800 | 21 | 9.00 | 0.034636 | 0.005027 | 0.1784816 | FALSE |
| wh1bb | wh1b | 24296 | 0 | 22 | 22 | 0.0600 | 0.2000 | 20 | 16.90 | 0.002827 | 0.031416 | 0.2893561 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 34 | 34 | 0.1200 | 0.1500 | 15 | 6.30 | 0.011310 | 0.017671 | 0.0912907 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 27 | 27 | 0.1400 | 0.1400 | 14 | 5.60 | 0.015394 | 0.015394 | 0.0862052 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 28 | 28 | 0.1300 | 0.1400 | 14 | 3.80 | 0.013273 | 0.015394 | 0.0544673 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 35 | 35 | 0.1000 | 0.1300 | 13 | 2.50 | 0.007854 | 0.013273 | 0.0264090 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 25 | 25 | 0.2600 | 0.0600 | 26 | 13.40 | 0.053093 | 0.002827 | 0.3746660 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 31 | 31 | 0.1400 | 0.2400 | 24 | 11.00 | 0.015394 | 0.045239 | 0.3334798 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 26 | 26 | 0.2100 | 0.2300 | 23 | 7.60 | 0.034636 | 0.041548 | 0.2894975 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 32 | 32 | 0.0700 | 0.2200 | 22 | 8.20 | 0.003848 | 0.038013 | 0.1716329 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 33 | 33 | 0.0800 | 0.2100 | 21 | 9.20 | 0.005027 | 0.034636 | 0.1824478 | FALSE |
| wh1bc | wh1b | 24296 | 0 | 30 | 30 | 0.3800 | 0.2800 | 38 | 3.50 | 0.113411 | 0.061575 | 0.3062265 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 36 | 36 | 0.1400 | 0.1900 | 19 | 8.70 | 0.015394 | 0.028353 | 0.1902979 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 42 | 42 | 0.1500 | 0.1800 | 18 | 2.00 | 0.017671 | 0.025447 | 0.0431183 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 37 | 37 | 0.0600 | 0.1800 | 18 | 10.60 | 0.002827 | 0.025447 | 0.1498538 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 39 | 39 | 0.1100 | 0.1600 | 16 | 4.90 | 0.009503 | 0.020106 | 0.0725432 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 40 | 40 | 0.1100 | 0.1100 | 11 | 2.60 | 0.009503 | 0.009503 | 0.0247086 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 38 | 38 | 0.2900 | 0.1800 | 29 | 8.90 | 0.066052 | 0.025447 | 0.4071697 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 41 | 41 | 0.1700 | 0.2200 | 22 | 2.50 | 0.022698 | 0.038013 | 0.0758890 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 45 | 45 | 0.1900 | 0.2000 | 20 | 2.30 | 0.028353 | 0.031416 | 0.0687341 | FALSE |
| wh1bd | wh1b | 24296 | 0 | 43 | 43 | 0.3100 | 0.3100 | 31 | 4.00 | 0.075477 | 0.075477 | 0.3019068 | FALSE |
| wh1be | wh1b | 24296 | 0 | 48 | 48 | 0.1700 | 0.1300 | 17 | 6.00 | 0.022698 | 0.013273 | 0.1079136 | FALSE |
| wh1be | wh1b | 24296 | 0 | 47 | 47 | 0.1600 | 0.0900 | 16 | 11.90 | 0.020106 | 0.006362 | 0.1574840 | FALSE |
| wh1be | wh1b | 24296 | 0 | 50 | 50 | 0.1500 | 0.1100 | 15 | 4.70 | 0.017671 | 0.009503 | 0.0638607 | FALSE |
| wh1be | wh1b | 24296 | 0 | 56 | 56 | 0.0900 | 0.1300 | 13 | 5.60 | 0.006362 | 0.013273 | 0.0549778 | FALSE |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| wh1be | wh1b | 24296 | 0 | 46 | 46 | 0.2300 | 0.1400 | 23 | 15.70 | 0.041548 | 0.015394 | 0.4469894 | FALSE |
| wh1be | wh1b | 24296 | 0 | 49 | 49 | 0.2100 | 0.2200 | 22 | 2.00 | 0.034636 | 0.038013 | 0.0726493 | FALSE |
| wh1be | wh1b | 24296 | 0 | 44 | 44 | 0.0800 | 0.5100 | 51 | 26.00 | 0.005027 | 0.204282 | 2.7210096 | FALSE |
| wh1bf | wh1b | 24296 | 0 | 57 | 57 | 0.0700 | 0.1500 | 15 | 6.20 | 0.003848 | 0.017671 | 0.0667117 | FALSE |
| wh1bf | wh1b | 24296 | 0 | 54 | 54 | 0.0700 | 0.1200 | 12 | 6.20 | 0.003848 | 0.011310 | 0.0469903 | FALSE |
| wh1bf | wh1b | 24296 | 0 | 53 | 53 | 0.0900 | 0.2600 | 26 | 13.30 | 0.006362 | 0.053093 | 0.3953730 | FALSE |
| wh1bf | wh1b | 24296 | 0 | 51 | 51 | 0.0900 | 0.2300 | 23 | 11.20 | 0.006362 | 0.041548 | 0.2682918 | FALSE |
| wh1bf | wh1b | 24296 | 0 | 52 | 52 | 0.2000 | 0.3800 | 38 | 15.00 | 0.031416 | 0.113411 | 1.0862047 | FALSE |
| wh1bf | wh1b | 24296 | 0 | 55 | 55 | 0.1700 | 0.3000 | 30 | 13.80 | 0.022698 | 0.070686 | 0.6443480 | FALSE |
| wh1bg | wh1b | 24296 | 0 | 61 | 61 | 0.0500 | 0.1900 | 19 | 8.20 | 0.001963 | 0.028353 | 0.1242970 | FALSE |
| wh1bg | wh1b | 24296 | 0 | 60 | 60 | 0.1300 | 0.1800 | 18 | 8.20 | 0.013273 | 0.025447 | 0.1587524 | FALSE |
| wh1bg | wh1b | 24296 | 0 | 62 | 62 | 0.1500 | 0.1700 | 17 | 5.00 | 0.017671 | 0.022698 | 0.1009236 | FALSE |
| wh1bg | wh1b | 24296 | 0 | 63 | 63 | 0.0300 | 0.1600 | 16 | 10.50 | 0.000707 | 0.020106 | 0.1092684 | FALSE |
| wh1bg | wh1b | 24296 | 0 | 58 | 58 | 0.2600 | 0.3300 | 33 | 6.50 | 0.053093 | 0.085530 | 0.4505236 | FALSE |
| wh1bg | wh1b | 24296 | 0 | 59 | 59 | 0.3100 | 0.3100 | 31 | 2.00 | 0.075477 | 0.075477 | 0.1509534 | FALSE |
| wh1bh | wh1b | 24296 | 0 | 64 | 64 | 0.2200 | 0.1700 | 22 | 5.00 | 0.038013 | 0.022698 | 0.1517781 | FALSE |
| wh1bh | wh1b | 24296 | 0 | 65 | 65 | 0.2200 | 0.1600 | 22 | 5.00 | 0.038013 | 0.020106 | 0.1452985 | FALSE |
| wh1bh | wh1b | 24296 | 0 | 66 | 66 | 0.1400 | 0.2200 | 22 | 6.80 | 0.015394 | 0.038013 | 0.1815839 | FALSE |
| wh1bh | wh1b | 24296 | 0 | 67 | 67 | 0.3000 | 0.2700 | 30 | 5.00 | 0.070686 | 0.057255 | 0.3198531 | FALSE |
| wh1bh | wh1b | 24296 | 0 | 68 | 68 | 0.4100 | 0.0340 | 41 | 4.00 | 0.132025 | 0.000908 | 0.2658665 | FALSE |
| wh1bi | wh1b | 24296 | 0 | 70 | 70 | 0.1000 | 0.1700 | 17 | 10.00 | 0.007854 | 0.022698 | 0.1527598 | FALSE |
| wh1bi | wh1b | 24296 | 0 | 72 | 72 | 0.1200 | 0.1400 | 14 | 6.90 | 0.011310 | 0.015394 | 0.0921271 | FALSE |
| wh1bi | wh1b | 24296 | 0 | 69 | 69 | 0.0800 | 0.1200 | 12 | 5.40 | 0.005027 | 0.011310 | 0.0441079 | FALSE |
| wh1bi | wh1b | 24296 | 0 | 87 | 87 | 0.1100 | 0.0400 | 11 | 1.00 | 0.009503 | 0.001257 | 0.0053800 | FALSE |
| wh1bi | wh1b | 24296 | 0 | 73 | 73 | 0.0800 | 0.1100 | 11 | 5.20 | 0.005027 | 0.009503 | 0.0377776 | FALSE |
| wh1bi | wh1b | 24296 | 0 | 71 | 71 | 0.3800 | 0.3700 | 38 | 3.00 | 0.113411 | 0.107521 | 0.3313985 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 79 | 79 | 0.1800 | 0.1300 | 18 | 3.50 | 0.025447 | 0.013273 | 0.0677602 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 82 | 82 | 0.1600 | 0.1100 | 16 | 5.60 | 0.020106 | 0.009503 | 0.0829066 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 78 | 78 | 0.1600 | 0.0600 | 16 | 6.50 | 0.020106 | 0.002827 | 0.0745342 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 81 | 81 | 0.1300 | 0.0900 | 13 | 3.60 | 0.013273 | 0.006362 | 0.0353429 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 83 | 83 | 0.0800 | 0.1200 | 12 | 3.60 | 0.005027 | 0.011310 | 0.0294053 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 84 | 84 | 0.1000 | 0.0700 | 10 | 2.20 | 0.007854 | 0.003848 | 0.0128727 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 80 | 80 | 0.2700 | 0.2800 | 28 | 2.60 | 0.057255 | 0.061575 | 0.1544798 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 75 | 75 | 0.2600 | 0.1500 | 26 | 6.10 | 0.053093 | 0.017671 | 0.2158312 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 85 | 85 | 0.1600 | 0.2200 | 22 | 3.20 | 0.020106 | 0.038013 | 0.0929911 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 86 | 86 | 0.2100 | 0.1500 | 21 | 3.40 | 0.034636 | 0.017671 | 0.0889227 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 76 | 76 | 0.0800 | 0.2000 | 20 | 9.20 | 0.005027 | 0.031416 | 0.1676352 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 77 | 77 | 0.2600 | 0.3500 | 35 | 5.10 | 0.053093 | 0.096211 | 0.3807254 | FALSE |
| wh1bj | wh1b | 24296 | 0 | 74 | 74 | 0.4500 | 0.3500 | 45 | 3.00 | 0.159043 | 0.096211 | 0.3828813 | FALSE |
| wh1ca | wh1c | 24296 | 0 | 14 | 14 | 0.1800 | 0.1900 | 19 | 2.60 | 0.025447 | 0.028353 | 0.0699396 | FALSE |
| wh1ca | wh1c | 24296 | 0 | 18 | 18 | 0.1200 | 0.0300 | 12 | 4.70 | 0.011310 | 0.000707 | 0.0282390 | FALSE |
| wh1ca | wh1c | 24296 | 0 | 11 | 11 | 0.1700 | 0.2000 | 20 | 3.30 | 0.022698 | 0.031416 | 0.0892879 | TRUE |
| wh1ca | wh1c | 24296 | 0 | 1 | 1 | 0.0500 | 0.2000 | 20 | 8.00 | 0.001963 | 0.031416 | 0.1335176 | FALSE |
| wh1ca | wh1c | 24296 | 0 | 12 | 12 | 0.3500 | 0.3100 | 35 | 3.30 | 0.096211 | 0.075477 | 0.2832850 | TRUE |
| wh1ca | wh1c | 24296 | 0 | 16 | 16 | 0.3300 | 0.2600 | 33 | 4.80 | 0.085530 | 0.053093 | 0.3326944 | FALSE |
| wh1ca | wh1c | 24296 | 0 | 17 | 17 | 0.3100 | 0.3100 | 31 | 3.30 | 0.075477 | 0.075477 | 0.2490731 | FALSE |
| wh1ca | wh1c | 24296 | 0 | 13 | 13 | 2.0000 | 1.2000 | 200 | 0.60 | 3.141590 | 1.130972 | 1.2817687 | TRUE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| wh1ca | wh1c | 24296 | 0 | | 15 | 15 | 0.3700 | 0.4000 | 40 | 5.80 | 0.107521 | 0.125664 | 0.6762351 | FALSE |
| wh1ca | wh1c | 24296 | 0 | | 3 | 3 | 0.3200 | 0.4000 | 40 | 6.30 | 0.080425 | 0.125664 | 0.6491782 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 27 | 27 | 0.1100 | 0.1700 | 17 | 3.10 | 0.009503 | 0.022698 | 0.0499120 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 21 | 21 | 0.1500 | 0.1300 | 15 | 5.00 | 0.017671 | 0.013273 | 0.0773617 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 28 | 28 | 0.0900 | 0.1500 | 15 | 4.20 | 0.006362 | 0.017671 | 0.0504696 | FALSE |
| wh1cb | wh1c | 24296 | 0 | a | 7 | 7 | 0.0800 | 0.1400 | 14 | 5.90 | 0.005027 | 0.015394 | 0.0602400 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 24 | 24 | 0.1300 | 0.1300 | 13 | 2.30 | 0.013273 | 0.013273 | 0.0305284 | FALSE |
| wh1cb | wh1c | 24296 | 0 | a | 34 | 34 | 0.1700 | 0.2800 | 28 | 6.90 | 0.022698 | 0.061575 | 0.2907424 | FALSE |
| wh1cb | wh1c | 24296 | 0 | | 5 | 5 | 0.1900 | 0.2700 | 27 | 7.30 | 0.028353 | 0.057255 | 0.3124704 | FALSE |
| wh1cb | wh1c | 24296 | 0 | | 6 | 6 | 0.2600 | 0.2200 | 26 | 3.10 | 0.053093 | 0.038013 | 0.1412145 | FALSE |
| wh1cb | wh1c | 24296 | 0 | a | 9 | 9 | 0.2500 | 0.1100 | 25 | 11.70 | 0.049087 | 0.009503 | 0.3427553 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 20 | 20 | 0.2000 | 0.2500 | 25 | 5.70 | 0.031416 | 0.049087 | 0.2294342 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 23 | 23 | 0.2400 | 0.2400 | 24 | 4.00 | 0.045239 | 0.045239 | 0.1809556 | FALSE |
| wh1cb | wh1c | 24296 | 0 | | 4 | 4 | 0.2300 | 0.2300 | 23 | 2.50 | 0.041548 | 0.041548 | 0.1038688 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 26 | 26 | 0.2300 | 0.2300 | 23 | 5.10 | 0.041548 | 0.041548 | 0.2118924 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 29 | 29 | 0.2000 | 0.2000 | 20 | 2.60 | 0.031416 | 0.031416 | 0.0816813 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 25 | 25 | 0.1300 | 0.2000 | 20 | 3.50 | 0.013273 | 0.031416 | 0.0782060 | FALSE |
| wh1cb | wh1c | 24296 | 0 | | 2 | 2 | 0.3800 | 0.3500 | 38 | 3.70 | 0.113411 | 0.096211 | 0.3878018 | TRUE |
| wh1cb | wh1c | 24296 | 0 | a | 8 | 8 | 0.3400 | 0.2200 | 34 | 12.60 | 0.090792 | 0.038013 | 0.8114727 | FALSE |
| wh1cb | wh1c | 24296 | 0 | b | 22 | 22 | 0.4200 | 0.5400 | 54 | 3.90 | 0.138544 | 0.229022 | 0.7167538 | FALSE |
| wh1cb | wh1c | 24296 | 0 | a | 10 | 10 | 0.2300 | 0.4700 | 47 | 14.90 | 0.041548 | 0.173494 | 1.6020617 | TRUE |
| wh1cc | wh1c | 24296 | 0 | a | 43 | 43 | 0.1700 | 0.1900 | 19 | 6.00 | 0.022698 | 0.028353 | 0.1531525 | FALSE |
| wh1cc | wh1c | 24296 | 0 | | 33 | 33 | 0.1600 | 0.1800 | 18 | 5.10 | 0.020106 | 0.025447 | 0.1161603 | FALSE |
| wh1cc | wh1c | 24296 | 0 | | 45 | 45 | 0.0900 | 0.1400 | 14 | 3.80 | 0.006362 | 0.015394 | 0.0413355 | FALSE |
| wh1cc | wh1c | 24296 | 0 | | 46 | 46 | 0.0700 | 0.1200 | 12 | 3.90 | 0.003848 | 0.011310 | 0.0295584 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 42 | 42 | 0.0900 | 0.1100 | 11 | 3.60 | 0.006362 | 0.009503 | 0.0285571 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 38 | 38 | 0.2700 | 0.2200 | 27 | 4.30 | 0.057255 | 0.038013 | 0.2048277 | FALSE |
| wh1cc | wh1c | 24296 | 0 | | 47 | 47 | 0.1300 | 0.2600 | 26 | 3.10 | 0.013273 | 0.053093 | 0.1028674 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 41 | 41 | 0.2500 | 0.2400 | 25 | 2.50 | 0.049087 | 0.045239 | 0.1179078 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 37 | 37 | 0.2400 | 0.2300 | 24 | 5.70 | 0.045239 | 0.041548 | 0.2473413 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 40 | 40 | 0.2300 | 0.2300 | 23 | 2.90 | 0.041548 | 0.041548 | 0.1204878 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 39 | 39 | 0.2000 | 0.2300 | 23 | 2.60 | 0.031416 | 0.041548 | 0.0948525 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 36 | 36 | 0.1500 | 0.2300 | 23 | 6.00 | 0.017671 | 0.041548 | 0.1776569 | FALSE |
| wh1cc | wh1c | 24296 | 0 | b | 31 | 31 | 0.1700 | 0.2100 | 21 | 3.90 | 0.022698 | 0.034636 | 0.1118013 | FALSE |
| wh1cc | wh1c | 24296 | 0 | b | 30 | 30 | 0.1200 | 0.2100 | 21 | 4.20 | 0.011310 | 0.034636 | 0.0964861 | FALSE |
| wh1cc | wh1c | 24296 | 0 | | 48 | 48 | 0.2000 | 0.1700 | 20 | 2.90 | 0.031416 | 0.022698 | 0.0784651 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 35 | 35 | 0.3500 | 0.2500 | 35 | 2.00 | 0.096211 | 0.049087 | 0.1452985 | FALSE |
| wh1cc | wh1c | 24296 | 0 | a | 44 | 44 | 3.0000 | 2.0000 | 300 | 1.00 | 7.068578 | 3.141590 | 5.1050838 | TRUE |
| wh1cc | wh1c | 24296 | 0 | | 49 | 49 | 2.1000 | 0.8000 | 210 | 2.10 | 3.463603 | 0.502654 | 4.1645702 | TRUE |
| wh1cc | wh1c | 24296 | 0 | | 32 | 32 | 0.4300 | 0.5600 | 56 | 6.40 | 0.145220 | 0.246301 | 1.2528661 | FALSE |
| wh1ce | wh1c | 24296 | 0 | | 50 | 50 | 0.2100 | 0.2600 | 26 | 4.20 | 0.034636 | 0.053093 | 0.1842307 | FALSE |
| wh1ce | wh1c | 24296 | 0 | | 51 | 51 | 0.2200 | 0.1800 | 22 | 2.40 | 0.038013 | 0.025447 | 0.0761521 | FALSE |
| wh1ce | wh1c | 24296 | 0 | | 52 | 52 | 0.2400 | 0.3000 | 30 | 7.20 | 0.045239 | 0.070686 | 0.4173288 | FALSE |
| wh1cf | wh1c | 24296 | 0 | | 53 | 53 | 0.1700 | 0.1400 | 17 | 6.00 | 0.022698 | 0.015394 | 0.1142753 | FALSE |
| wh1cf | wh1c | 24296 | 0 | | 54 | 54 | 0.1400 | 0.1300 | 14 | 3.00 | 0.015394 | 0.013273 | 0.0430005 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 72 | 72 | 0.0800 | 0.1400 | 14 | 5.70 | 0.005027 | 0.015394 | 0.0581980 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 71 | 71 | 0.1200 | 0.1200 | 12 | 3.60 | 0.011310 | 0.011310 | 0.0407150 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| wh1cg | wh1c | 24296 | 0 | | 74 | 74 | 0.1200 | 0.1200 | 12 | 5.00 | 0.011310 | 0.011310 | 0.0565486 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 70 | 70 | 0.1200 | 0.0900 | 12 | 3.60 | 0.011310 | 0.006362 | 0.0318086 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 69 | 69 | 0.1200 | 0.0400 | 12 | 5.00 | 0.011310 | 0.001257 | 0.0314159 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 75 | 75 | 0.2700 | 0.1600 | 27 | 7.60 | 0.057255 | 0.020106 | 0.2939743 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 58 | 58 | 0.2400 | 0.2600 | 26 | 3.50 | 0.045239 | 0.053093 | 0.1720806 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 56 | 56 | 0.1900 | 0.2000 | 20 | 4.20 | 0.028353 | 0.031416 | 0.1255144 | FALSE |
| wh1cg | wh1c | 24296 | 0 | | 55 | 55 | 0.2000 | 0.3500 | 35 | 9.40 | 0.031416 | 0.096211 | 0.5998473 | TRUE |
| wh1cg | wh1c | 24296 | 0 | | 73 | 73 | 0.2200 | 0.3200 | 32 | 7.00 | 0.038013 | 0.080425 | 0.4145328 | TRUE |
| wh1cg | wh1c | 24296 | 0 | | 57 | 57 | 2.2000 | 1.0000 | 220 | 3.30 | 3.801324 | 0.785398 | 7.5680903 | TRUE |
| wh1ch | wh1c | 24296 | 0 | | 62 | 62 | 0.1700 | 0.1300 | 17 | 3.40 | 0.022698 | 0.013273 | 0.0611510 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 59 | 59 | 0.2200 | 0.2600 | 26 | 2.80 | 0.038013 | 0.053093 | 0.1275486 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 76 | 76 | 0.2400 | 0.1000 | 24 | 12.10 | 0.045239 | 0.007854 | 0.3212119 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 77 | 77 | 0.2300 | 0.3800 | 38 | 11.70 | 0.041548 | 0.113411 | 0.9065097 | TRUE |
| wh1ch | wh1c | 24296 | 0 | | 60 | 60 | 0.3200 | 0.3600 | 36 | 3.90 | 0.080425 | 0.101788 | 0.3553138 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 61 | 61 | 0.3400 | 0.2800 | 34 | 4.40 | 0.090792 | 0.061575 | 0.3352077 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 93 | 93 | 0.2500 | 0.3000 | 30 | 3.30 | 0.049087 | 0.070686 | 0.1976256 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 92 | 92 | 0.2200 | 0.3000 | 30 | 5.50 | 0.038013 | 0.070686 | 0.2989223 | FALSE |
| wh1ch | wh1c | 24296 | 0 | | 78 | 78 | 2.0000 | 0.6000 | 200 | 3.00 | 3.141590 | 0.282743 | 5.1364997 | TRUE |
| wh1ci | wh1c | 24296 | 0 | | 79 | 79 | 0.1900 | 0.1900 | 19 | 2.30 | 0.028353 | 0.028353 | 0.0652116 | FALSE |
| wh1ci | wh1c | 24296 | 0 | | 63 | 63 | 0.1700 | 0.0500 | 17 | 12.20 | 0.022698 | 0.001963 | 0.1504350 | TRUE |
| wh1ci | wh1c | 24296 | 0 | | 67 | 67 | 0.1600 | 0.1600 | 16 | 3.10 | 0.020106 | 0.020106 | 0.0623291 | FALSE |
| wh1ci | wh1c | 24296 | 0 | | 66 | 66 | 0.1300 | 0.1300 | 13 | 2.90 | 0.013273 | 0.013273 | 0.0384923 | FALSE |
| wh1ci | wh1c | 24296 | 0 | c | 82 | 82 | 0.1200 | 0.1200 | 12 | 2.90 | 0.011310 | 0.011310 | 0.0327982 | FALSE |
| wh1ci | wh1c | 24296 | 0 | c | 85 | 85 | 0.1100 | 0.1100 | 11 | 2.50 | 0.009503 | 0.009503 | 0.0237583 | FALSE |
| wh1ci | wh1c | 24296 | 0 | | 64 | 64 | 0.0100 | 0.1000 | 10 | 9.50 | 0.000079 | 0.007854 | 0.0376794 | FALSE |
| wh1ci | wh1c | 24296 | 0 | c | 80 | 80 | 0.2600 | 0.2000 | 26 | 6.70 | 0.053093 | 0.031416 | 0.2831044 | FALSE |
| wh1ci | wh1c | 24296 | 0 | | 68 | 68 | 0.2000 | 0.2000 | 20 | 2.10 | 0.031416 | 0.031416 | 0.0659734 | FALSE |
| wh1ci | wh1c | 24296 | 0 | c | 81 | 81 | 0.2200 | 0.3100 | 31 | 9.60 | 0.038013 | 0.075477 | 0.5447517 | TRUE |
| wh1cj | wh1c | 24296 | 0 | c | 91 | 91 | 0.1500 | 0.1700 | 17 | 3.40 | 0.017671 | 0.022698 | 0.0686280 | FALSE |
| wh1cj | wh1c | 24296 | 0 | c | 88 | 88 | 0.1100 | 0.1500 | 15 | 4.90 | 0.009503 | 0.017671 | 0.0665781 | FALSE |
| wh1cj | wh1c | 24296 | 0 | c | 83 | 83 | 0.2700 | 0.0900 | 27 | 12.70 | 0.057255 | 0.006362 | 0.4039692 | TRUE |
| wh1cj | wh1c | 24296 | 0 | c | 87 | 87 | 0.2600 | 0.2600 | 26 | 2.20 | 0.053093 | 0.053093 | 0.1168043 | FALSE |
| wh1cj | wh1c | 24296 | 0 | c | 90 | 90 | 0.2200 | 0.1700 | 22 | 2.10 | 0.038013 | 0.022698 | 0.0637468 | FALSE |
| wh1cj | wh1c | 24296 | 0 | c | 84 | 84 | 0.3400 | 0.1700 | 34 | 10.90 | 0.090792 | 0.022698 | 0.6185202 | TRUE |
| wh1cj | wh1c | 24296 | 0 | c | 86 | 86 | 0.2600 | 0.3400 | 34 | 5.60 | 0.053093 | 0.090792 | 0.4028775 | FALSE |
| wh1cj | wh1c | 24296 | 0 | c | 89 | 89 | 3.0000 | 1.5000 | 300 | 3.60 | 7.068578 | 1.767144 | 15.9042994 | TRUE |
| yo1aa | yo1a | 57523 | 0 | a | 3 | 3 | 0.1600 | 0.1400 | 16 | 2.10 | 0.020106 | 0.015394 | 0.0372750 | FALSE |
| yo1aa | yo1a | 57523 | 0 | a | 4 | 4 | 0.1300 | 0.1200 | 13 | 3.90 | 0.013273 | 0.011310 | 0.0479367 | FALSE |
| yo1aa | yo1a | 57523 | 0 | a | 2 | 2 | 0.2200 | 0.2500 | 25 | 4.50 | 0.038013 | 0.049087 | 0.1959763 | FALSE |
| yo1aa | yo1a | 57523 | 0 | a | 5 | 5 | 0.1300 | 0.2500 | 25 | 2.80 | 0.013273 | 0.049087 | 0.0873048 | FALSE |
| yo1aa | yo1a | 57523 | 0 | a | 6 | 6 | 0.1900 | 0.2200 | 22 | 2.20 | 0.028353 | 0.038013 | 0.0730027 | FALSE |
| yo1aa | yo1a | 57523 | 0 | | 7 | 7 | 0.3500 | 0.3500 | 35 | 2.50 | 0.096211 | 0.096211 | 0.2405280 | FALSE |
| yo1aa | yo1a | 57523 | 0 | | 1 | 1 | 0.5000 | 1.0000 | 100 | 4.10 | 0.196349 | 0.785398 | 2.0125811 | TRUE |
| yo1ab | yo1a | 57523 | 0 | | 8 | 8 | 0.1200 | 0.0600 | 12 | 7.30 | 0.011310 | 0.002827 | 0.0516006 | FALSE |
| yo1ab | yo1a | 57523 | 0 | | 9 | 9 | 0.2200 | 0.2300 | 23 | 2.50 | 0.038013 | 0.041548 | 0.0994510 | FALSE |
| yo1ad | yo1a | 57523 | 0 | | 10 | 10 | 0.1700 | 0.2700 | 27 | 4.50 | 0.022698 | 0.057255 | 0.1798953 | FALSE |
| yo1ad | yo1a | 57523 | 1 | | 164 | 164 | 0.2300 | 0.2800 | 28 | 3.80 | 0.041548 | 0.061575 | 0.1959331 | TRUE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1ad | yo1a | 57523 | 1 | | 165 | 165 | 0.1100 | 0.2400 | 24 | 2.20 | 0.009503 | 0.045239 | 0.0602164 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 17 | 17 | 0.1700 | 0.0700 | 17 | 5.10 | 0.022698 | 0.003848 | 0.0676934 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 21 | 21 | 0.1600 | 0.1600 | 16 | 3.20 | 0.020106 | 0.020106 | 0.0643398 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 19 | 19 | 0.1600 | 0.1200 | 16 | 2.80 | 0.020106 | 0.011310 | 0.0439823 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 15 | 15 | 0.1200 | 0.1500 | 15 | 2.40 | 0.011310 | 0.017671 | 0.0347774 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 14 | 14 | 0.2900 | 0.1800 | 29 | 2.60 | 0.066052 | 0.025447 | 0.1189485 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 16 | 16 | 0.1700 | 0.2300 | 23 | 2.20 | 0.022698 | 0.041548 | 0.0706701 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 22 | 22 | 0.2100 | 0.0800 | 21 | 2.60 | 0.034636 | 0.005027 | 0.0515613 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 11 | 11 | 0.2000 | 0.1700 | 20 | 3.30 | 0.031416 | 0.022698 | 0.0892879 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 12 | 12 | 0.0600 | 0.2000 | 20 | 11.00 | 0.002827 | 0.031416 | 0.1883383 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 18 | 18 | 0.3400 | 0.3000 | 34 | 5.00 | 0.090792 | 0.070686 | 0.4036943 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 13 | 13 | 0.1300 | 0.3200 | 32 | 3.70 | 0.013273 | 0.080425 | 0.1733412 | FALSE |
| yo1ae | yo1a | 57523 | 0 | | 20 | 20 | 0.3000 | 0.2700 | 30 | 2.10 | 0.070686 | 0.057255 | 0.1343383 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 170 | 170 | 0.1600 | 0.1000 | 16 | 3.00 | 0.020106 | 0.007854 | 0.0419402 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 169 | 169 | 0.1500 | 0.1200 | 15 | 2.20 | 0.017671 | 0.011310 | 0.0318793 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 166 | 166 | 0.1200 | 0.1200 | 12 | 2.50 | 0.011310 | 0.011310 | 0.0282743 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 167 | 167 | 0.2600 | 0.1100 | 26 | 3.40 | 0.053093 | 0.009503 | 0.1064135 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 171 | 171 | 0.1200 | 0.2400 | 24 | 2.00 | 0.011310 | 0.045239 | 0.0565486 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 172 | 172 | 0.1400 | 0.2400 | 24 | 2.30 | 0.015394 | 0.045239 | 0.0697276 | FALSE |
| yo1ae | yo1a | 57523 | 1 | | 168 | 168 | 2.4300 | 0.2400 | 243 | 2.00 | 4.637694 | 0.045239 | 4.6829326 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 38 | 38 | 0.1700 | 0.1900 | 19 | 2.00 | 0.022698 | 0.028353 | 0.0510508 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 41 | 41 | 0.1700 | 0.1900 | 19 | 4.60 | 0.022698 | 0.028353 | 0.1174169 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 28 | 28 | 0.1800 | 0.1600 | 18 | 3.10 | 0.025447 | 0.020106 | 0.0706072 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 37 | 37 | 0.1800 | 0.1500 | 18 | 2.10 | 0.025447 | 0.017671 | 0.0452742 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 36 | 36 | 0.1300 | 0.1600 | 16 | 3.80 | 0.013273 | 0.020106 | 0.0634208 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 42 | 42 | 0.1000 | 0.1300 | 13 | 3.60 | 0.007854 | 0.013273 | 0.0380289 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 39 | 39 | 0.1000 | 0.1200 | 12 | 4.40 | 0.007854 | 0.011310 | 0.0421601 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 34 | 34 | 0.1700 | 0.2400 | 24 | 3.30 | 0.022698 | 0.045239 | 0.1120959 | TRUE |
| yo1af | yo1a | 57523 | 0 | b | 32 | 32 | 0.2300 | 0.1400 | 23 | 3.60 | 0.041548 | 0.015394 | 0.1024944 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 31 | 31 | 0.2200 | 0.2300 | 23 | 8.40 | 0.038013 | 0.041548 | 0.3341552 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 30 | 30 | 0.2200 | 0.1800 | 22 | 8.40 | 0.038013 | 0.025447 | 0.2665325 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 24 | 24 | 0.1000 | 0.2200 | 22 | 3.40 | 0.007854 | 0.038013 | 0.0779743 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 40 | 40 | 0.3700 | 0.2400 | 37 | 7.50 | 0.107521 | 0.045239 | 0.5728493 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 25 | 25 | 0.3200 | 0.3600 | 36 | 4.30 | 0.080425 | 0.101788 | 0.3917563 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 29 | 29 | 0.3100 | 0.2200 | 31 | 4.00 | 0.075477 | 0.038013 | 0.2269799 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 27 | 27 | 0.1900 | 0.3100 | 31 | 8.00 | 0.028353 | 0.075477 | 0.4153182 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 33 | 33 | 0.1300 | 0.3000 | 30 | 4.80 | 0.013273 | 0.070686 | 0.2015016 | TRUE |
| yo1af | yo1a | 57523 | 0 | b | 43 | 43 | 1.0000 | 2.2000 | 220 | 3.70 | 0.785398 | 3.801324 | 8.4854346 | TRUE |
| yo1af | yo1a | 57523 | 0 | b | 26 | 26 | 0.3300 | 0.5500 | 55 | 6.80 | 0.085530 | 0.237583 | 1.0985826 | FALSE |
| yo1af | yo1a | 57523 | 0 | b | 35 | 35 | 0.4100 | 0.4800 | 48 | 3.30 | 0.132025 | 0.180956 | 0.5164185 | TRUE |
| yo1af | yo1a | 57523 | 0 | b | 23 | 23 | 0.4100 | 0.1600 | 41 | 11.80 | 0.132025 | 0.020106 | 0.8975758 | FALSE |
| yo1af | yo1a | 57523 | 1 | | 174 | 174 | 0.1900 | 0.1000 | 19 | 3.90 | 0.028353 | 0.007854 | 0.0706033 | FALSE |
| yo1af | yo1a | 57523 | 1 | | 176 | 176 | 0.1700 | 0.1100 | 17 | 2.30 | 0.022698 | 0.009503 | 0.0370315 | TRUE |
| yo1af | yo1a | 57523 | 1 | | 175 | 175 | 0.1600 | 0.1400 | 16 | 3.30 | 0.020106 | 0.015394 | 0.0585749 | FALSE |
| yo1af | yo1a | 57523 | 1 | | 173 | 173 | 0.1500 | 0.1000 | 15 | 3.90 | 0.017671 | 0.007854 | 0.0497746 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 77 | 77 | 0.0600 | 0.1900 | 19 | 8.90 | 0.002827 | 0.028353 | 0.1387522 | TRUE |
| yo1ag | yo1a | 57523 | 0 | b | 75 | 75 | 0.1900 | 0.1900 | 19 | 6.30 | 0.028353 | 0.028353 | 0.1786230 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1ag | yo1a | 57523 | 0 | b | 44 | 44 | 0.0900 | 0.1800 | 18 | 6.30 | 0.006362 | 0.025447 | 0.1001971 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 55 | 55 | 0.1600 | 0.1200 | 16 | 2.20 | 0.020106 | 0.011310 | 0.0345575 | TRUE |
| yo1ag | yo1a | 57523 | 0 | b | 50 | 50 | 0.1600 | 0.0500 | 16 | 4.90 | 0.020106 | 0.001963 | 0.0540707 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 59 | 59 | 0.1000 | 0.1600 | 16 | 4.50 | 0.007854 | 0.020106 | 0.0629103 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 67 | 67 | 0.1400 | 0.1400 | 14 | 4.10 | 0.015394 | 0.015394 | 0.0631145 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 80 | 80 | 0.1300 | 0.1100 | 13 | 3.10 | 0.013273 | 0.009503 | 0.0353036 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 51 | 51 | 0.1200 | 0.0600 | 12 | 5.80 | 0.011310 | 0.002827 | 0.0409977 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 68 | 68 | 0.1100 | 0.0500 | 11 | 4.60 | 0.009503 | 0.001963 | 0.0263736 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 49 | 49 | 0.1000 | 0.1000 | 10 | 5.40 | 0.007854 | 0.007854 | 0.0424115 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 57 | 57 | 0.2700 | 0.2300 | 27 | 9.00 | 0.057255 | 0.041548 | 0.4446135 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 48 | 48 | 0.2500 | 0.1800 | 25 | 6.40 | 0.049087 | 0.025447 | 0.2385095 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 58 | 58 | 0.2100 | 0.2500 | 25 | 2.30 | 0.034636 | 0.049087 | 0.0962819 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 65 | 65 | 0.1900 | 0.2500 | 25 | 5.50 | 0.028353 | 0.049087 | 0.2129605 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 52 | 52 | 0.1900 | 0.2400 | 24 | 2.90 | 0.028353 | 0.045239 | 0.1067080 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 66 | 66 | 0.0700 | 0.2300 | 23 | 12.00 | 0.003848 | 0.041548 | 0.2723759 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 53 | 53 | 0.2000 | 0.2200 | 22 | 2.80 | 0.031416 | 0.038013 | 0.0972008 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 47 | 47 | 0.1500 | 0.2200 | 22 | 3.59 | 0.017671 | 0.038013 | 0.0999540 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 74 | 74 | 0.2100 | 0.1800 | 21 | 2.60 | 0.034636 | 0.025447 | 0.0781078 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 45 | 45 | 0.2000 | 0.1900 | 20 | 4.20 | 0.031416 | 0.028353 | 0.1255144 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 54 | 54 | 0.1700 | 0.2000 | 20 | 2.00 | 0.022698 | 0.031416 | 0.0541139 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 76 | 76 | 0.2900 | 0.3800 | 38 | 5.70 | 0.066052 | 0.113411 | 0.5114705 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 63 | 63 | 0.3400 | 0.3400 | 34 | 3.40 | 0.090792 | 0.090792 | 0.3086926 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 62 | 62 | 0.3300 | 0.2000 | 33 | 7.10 | 0.085530 | 0.031416 | 0.4151572 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 60 | 60 | 0.3200 | 0.1600 | 32 | 5.80 | 0.080425 | 0.020106 | 0.2915396 | TRUE |
| yo1ag | yo1a | 57523 | 0 | b | 46 | 46 | 0.3000 | 0.3000 | 30 | 3.64 | 0.070686 | 0.070686 | 0.2572962 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 56 | 56 | 0.1600 | 0.3000 | 30 | 9.90 | 0.020106 | 0.070686 | 0.4494202 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 79 | 79 | 2.2500 | 0.7000 | 225 | 2.25 | 3.976075 | 0.384845 | 4.9060346 | TRUE |
| yo1ag | yo1a | 57523 | 0 | b | 64 | 64 | 0.4800 | 0.2200 | 48 | 5.50 | 0.180956 | 0.038013 | 0.6021643 | FALSE |
| yo1ag | yo1a | 57523 | 0 | b | 61 | 61 | 0.4000 | 0.3000 | 40 | 7.20 | 0.125664 | 0.070686 | 0.7068578 | FALSE |
| yo1ag | yo1a | 57523 | 1 | | 183 | 183 | 0.1800 | 0.1600 | 18 | 1.80 | 0.025447 | 0.020106 | 0.0409977 | FALSE |
| yo1ag | yo1a | 57523 | 1 | | 182 | 182 | 0.1600 | 0.0600 | 16 | 2.30 | 0.020106 | 0.002827 | 0.0263736 | FALSE |
| yo1ag | yo1a | 57523 | 1 | | 180 | 180 | 0.1200 | 0.2100 | 21 | 3.90 | 0.011310 | 0.034636 | 0.0895942 | TRUE |
| yo1ag | yo1a | 57523 | 1 | | 178 | 178 | 0.1700 | 0.2000 | 20 | 3.50 | 0.022698 | 0.031416 | 0.0946993 | FALSE |
| yo1ag | yo1a | 57523 | 1 | | 181 | 181 | 0.1900 | 0.2000 | 20 | 2.80 | 0.028353 | 0.031416 | 0.0836762 | FALSE |
| yo1ag | yo1a | 57523 | 1 | | 179 | 179 | 0.3200 | 0.3700 | 37 | 6.40 | 0.080425 | 0.107521 | 0.6014260 | FALSE |
| yo1ag | yo1a | 57523 | 1 | | 177 | 177 | 0.3600 | 0.2100 | 36 | 8.00 | 0.101788 | 0.034636 | 0.5456942 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 87 | 87 | 0.1900 | 0.1900 | 19 | 2.00 | 0.028353 | 0.028353 | 0.0567057 | TRUE |
| yo1ah | yo1a | 57523 | 0 | b | 90 | 90 | 0.1900 | 0.1500 | 19 | 4.20 | 0.028353 | 0.017671 | 0.0966510 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 97 | 97 | 0.1800 | 0.1800 | 18 | 2.00 | 0.025447 | 0.025447 | 0.0508938 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 96 | 96 | 0.1800 | 0.1600 | 18 | 5.90 | 0.025447 | 0.020106 | 0.1343815 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 93 | 93 | 0.1800 | 0.0800 | 18 | 3.90 | 0.025447 | 0.005027 | 0.0594232 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 85 | 85 | 0.1700 | 0.1700 | 17 | 2.90 | 0.022698 | 0.022698 | 0.0658242 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 69 | 69 | 0.1600 | 0.0900 | 16 | 9.74 | 0.020106 | 0.006362 | 0.1288987 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 82 | 82 | 0.1300 | 0.1000 | 13 | 3.70 | 0.013273 | 0.007854 | 0.0390853 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 99 | 99 | 0.0900 | 0.1300 | 13 | 4.00 | 0.006362 | 0.013273 | 0.0392699 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 94 | 94 | 0.1200 | 0.1200 | 12 | 2.60 | 0.011310 | 0.011310 | 0.0294053 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 70 | 70 | 0.1200 | 0.0600 | 12 | 9.96 | 0.011310 | 0.002827 | 0.0704030 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1ah | yo1a | 57523 | 0 | b | 81 | 81 | 0.1000 | 0.1200 | 12 | 6.70 | 0.007854 | 0.011310 | 0.0641984 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 91 | 91 | 0.1100 | 0.0200 | 11 | 4.90 | 0.009503 | 0.000314 | 0.0240528 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 100 | 100 | 0.2700 | 0.2900 | 29 | 12.80 | 0.057255 | 0.066052 | 0.7891674 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 83 | 83 | 0.2700 | 0.2700 | 27 | 3.90 | 0.057255 | 0.057255 | 0.2232964 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 95 | 95 | 0.2500 | 0.1000 | 25 | 4.60 | 0.049087 | 0.007854 | 0.1309650 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 89 | 89 | 0.2200 | 0.2100 | 22 | 2.50 | 0.038013 | 0.034636 | 0.0908116 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 71 | 71 | 0.2100 | 0.0300 | 21 | 15.73 | 0.034636 | 0.000707 | 0.2779718 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 98 | 98 | 0.2000 | 0.1600 | 20 | 3.60 | 0.031416 | 0.020106 | 0.0927397 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 72 | 72 | 0.3600 | 0.3600 | 36 | 6.93 | 0.101788 | 0.101788 | 0.7053875 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 92 | 92 | 0.2700 | 0.3200 | 32 | 3.60 | 0.057255 | 0.080425 | 0.2478243 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 88 | 88 | 0.5000 | 1.5000 | 150 | 1.50 | 0.196349 | 1.767144 | 1.4726203 | TRUE |
| yo1ah | yo1a | 57523 | 0 | b | 78 | 78 | 0.5800 | 0.3600 | 58 | 8.20 | 0.264208 | 0.101788 | 1.5005805 | TRUE |
| yo1ah | yo1a | 57523 | 0 | b | 102 | 102 | 0.2500 | 0.5400 | 54 | 14.00 | 0.049087 | 0.229022 | 1.9467648 | TRUE |
| yo1ah | yo1a | 57523 | 0 | b | 73 | 73 | 0.4700 | 0.2700 | 47 | 9.50 | 0.173494 | 0.057255 | 1.0960615 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 84 | 84 | 0.3200 | 0.4600 | 46 | 2.90 | 0.080425 | 0.166190 | 0.3575915 | FALSE |
| yo1ah | yo1a | 57523 | 0 | b | 86 | 86 | 0.4000 | 0.4000 | 40 | 3.30 | 0.125664 | 0.125664 | 0.4146899 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 112 | 112 | 0.1900 | 0.1900 | 19 | 3.00 | 0.028353 | 0.028353 | 0.0850585 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 106 | 106 | 0.1700 | 0.1700 | 17 | 2.30 | 0.022698 | 0.022698 | 0.0522054 | FALSE |
| yo1ai | yo1a | 57523 | 0 | | 136 | 136 | 0.1600 | 0.0500 | 16 | 14.80 | 0.020106 | 0.001963 | 0.1633156 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 104 | 104 | 0.1600 | 0.1600 | 16 | 3.80 | 0.020106 | 0.020106 | 0.0764035 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 117 | 117 | 0.1500 | 0.1400 | 15 | 3.70 | 0.017671 | 0.015394 | 0.0611707 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 122 | 122 | 0.1500 | 0.0800 | 15 | 10.00 | 0.017671 | 0.005027 | 0.1134899 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 108 | 108 | 0.1500 | 0.0600 | 15 | 8.60 | 0.017671 | 0.002827 | 0.0881452 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 109 | 109 | 0.1400 | 0.0600 | 14 | 10.30 | 0.015394 | 0.002827 | 0.0938393 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 128 | 128 | 0.1200 | 0.1200 | 12 | 2.80 | 0.011310 | 0.011310 | 0.0316672 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 111 | 111 | 0.1200 | 0.0800 | 12 | 7.10 | 0.011310 | 0.005027 | 0.0579938 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 127 | 127 | 0.1000 | 0.1000 | 10 | 2.80 | 0.007854 | 0.007854 | 0.0219911 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 105 | 105 | 0.2900 | 0.2400 | 29 | 6.50 | 0.066052 | 0.045239 | 0.3616952 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 119 | 119 | 0.2500 | 0.2800 | 28 | 3.40 | 0.049087 | 0.061575 | 0.1881263 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 118 | 118 | 0.2700 | 0.2700 | 27 | 3.40 | 0.057255 | 0.057255 | 0.1946686 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 110 | 110 | 0.2600 | 0.1600 | 26 | 6.60 | 0.053093 | 0.020106 | 0.2415569 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 126 | 126 | 0.2300 | 0.2300 | 23 | 2.40 | 0.041548 | 0.041548 | 0.0997141 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 103 | 103 | 0.2100 | 0.1500 | 21 | 2.00 | 0.034636 | 0.017671 | 0.0523075 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 114 | 114 | 0.2000 | 0.0700 | 20 | 12.10 | 0.031416 | 0.003848 | 0.2133493 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 107 | 107 | 0.2500 | 0.3800 | 38 | 3.30 | 0.049087 | 0.113411 | 0.2681229 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 101 | 101 | 0.3600 | 0.2300 | 36 | 4.30 | 0.101788 | 0.041548 | 0.3081703 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 115 | 115 | 0.3500 | 0.3300 | 35 | 5.70 | 0.096211 | 0.085530 | 0.5179618 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 113 | 113 | 0.3500 | 0.1700 | 35 | 8.20 | 0.096211 | 0.022698 | 0.4875276 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 116 | 116 | 0.3100 | 0.2300 | 31 | 5.80 | 0.075477 | 0.041548 | 0.3393703 | FALSE |
| yo1ai | yo1a | 57523 | 0 | | 135 | 135 | 0.3000 | 0.1600 | 30 | 14.30 | 0.070686 | 0.020106 | 0.6491624 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 125 | 125 | 0.3000 | 0.3000 | 30 | 2.90 | 0.070686 | 0.070686 | 0.2049887 | FALSE |
| yo1ai | yo1a | 57523 | 0 | b | 123 | 123 | 1.0000 | 2.6000 | 260 | 3.60 | 0.785398 | 5.309287 | 10.9704323 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 121 | 121 | 0.5000 | 1.2000 | 120 | 2.20 | 0.196349 | 1.130972 | 1.4600540 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 120 | 120 | 0.2200 | 0.4800 | 48 | 3.40 | 0.038013 | 0.180956 | 0.3722470 | TRUE |
| yo1ai | yo1a | 57523 | 0 | b | 124 | 124 | 0.4500 | 0.4500 | 45 | 2.70 | 0.159043 | 0.159043 | 0.4294161 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 154 | 154 | 0.1900 | 0.1300 | 19 | 2.70 | 0.028353 | 0.013273 | 0.0561952 | TRUE |
| yo1aj | yo1a | 57523 | 0 | c | 143 | 143 | 0.1900 | 0.1900 | 19 | 3.90 | 0.028353 | 0.028353 | 0.1105761 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1aj | yo1a | 57523 | 0 | c | 134 | 134 | 0.1800 | 0.1800 | 18 | 5.70 | 0.025447 | 0.025447 | 0.1450472 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 140 | 140 | 0.1700 | 0.1400 | 17 | 6.00 | 0.022698 | 0.015394 | 0.1142753 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 159 | 159 | 0.1000 | 0.1700 | 17 | 4.00 | 0.007854 | 0.022698 | 0.0611039 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 136 | 136 | 0.1600 | 0.0500 | 16 | 14.80 | 0.020106 | 0.001963 | 0.1633156 | TRUE |
| yo1aj | yo1a | 57523 | 0 | c | 144 | 144 | 0.1600 | 0.1600 | 16 | 4.00 | 0.020106 | 0.020106 | 0.0804247 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 147 | 147 | 0.1500 | 0.1500 | 15 | 2.00 | 0.017671 | 0.017671 | 0.0353429 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 133 | 133 | 0.1400 | 0.1400 | 14 | 3.70 | 0.015394 | 0.015394 | 0.0569570 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 137 | 137 | 0.1200 | 0.1200 | 12 | 7.40 | 0.011310 | 0.011310 | 0.0836920 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 161 | 161 | 0.1000 | 0.1100 | 11 | 5.10 | 0.007854 | 0.009503 | 0.0442611 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 153 | 153 | 0.1000 | 0.0900 | 10 | 3.90 | 0.007854 | 0.006362 | 0.0277206 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 162 | 162 | 0.0500 | 0.1000 | 10 | 5.10 | 0.001963 | 0.007854 | 0.0250345 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 141 | 141 | 0.1900 | 0.2900 | 29 | 7.40 | 0.028353 | 0.066052 | 0.3492977 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 142 | 142 | 0.2800 | 0.2800 | 28 | 3.90 | 0.061575 | 0.061575 | 0.2401431 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 145 | 145 | 0.2200 | 0.2500 | 25 | 2.80 | 0.038013 | 0.049087 | 0.1219408 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 146 | 146 | 0.2400 | 0.2400 | 24 | 12.80 | 0.045239 | 0.045239 | 0.5790579 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 157 | 157 | 0.2000 | 0.2300 | 23 | 3.70 | 0.031416 | 0.041548 | 0.1349823 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 138 | 138 | 0.2200 | 0.2200 | 22 | 7.10 | 0.038013 | 0.038013 | 0.2698940 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 160 | 160 | 0.2100 | 0.1300 | 21 | 3.60 | 0.034636 | 0.013273 | 0.0862366 | TRUE |
| yo1aj | yo1a | 57523 | 0 | c | 131 | 131 | 0.2100 | 0.2100 | 21 | 4.70 | 0.034636 | 0.034636 | 0.1627893 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 163 | 163 | 0.2100 | 0.0800 | 21 | 3.80 | 0.034636 | 0.005027 | 0.0753589 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 156 | 156 | 0.3900 | 0.3900 | 39 | 4.30 | 0.119459 | 0.119459 | 0.5136735 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 149 | 149 | 0.3400 | 0.3400 | 34 | 6.70 | 0.090792 | 0.090792 | 0.6083061 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 130 | 130 | 0.3400 | 0.2800 | 34 | 2.60 | 0.090792 | 0.061575 | 0.1980772 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 132 | 132 | 0.3400 | 0.2800 | 34 | 3.80 | 0.090792 | 0.061575 | 0.2894975 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 148 | 148 | 0.2900 | 0.3300 | 33 | 4.00 | 0.066052 | 0.085530 | 0.3031634 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 129 | 129 | 0.3200 | 0.3200 | 32 | 3.30 | 0.080425 | 0.080425 | 0.2654015 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 152 | 152 | 0.3200 | 0.3200 | 32 | 2.30 | 0.080425 | 0.080425 | 0.1849768 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 155 | 155 | 0.4600 | 0.3100 | 46 | 4.10 | 0.166190 | 0.075477 | 0.4954170 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 150 | 150 | 0.4300 | 0.4600 | 46 | 3.20 | 0.145220 | 0.166190 | 0.4982562 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 151 | 151 | 0.3000 | 0.4600 | 46 | 3.20 | 0.070686 | 0.166190 | 0.3790014 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 139 | 139 | 0.4300 | 0.4300 | 43 | 7.10 | 0.145220 | 0.145220 | 1.0310620 | FALSE |
| yo1aj | yo1a | 57523 | 0 | c | 158 | 158 | 0.4000 | 0.4000 | 40 | 3.00 | 0.125664 | 0.125664 | 0.3769908 | FALSE |
| yo1ba | yo1b | 57523 | 0 | | 1 | 1 | 0.1000 | 0.1700 | 17 | 5.60 | 0.007854 | 0.022698 | 0.0855455 | FALSE |
| yo1ba | yo1b | 57523 | 0 | | 5 | 5 | 0.2100 | 0.1100 | 21 | 2.20 | 0.034636 | 0.009503 | 0.0485533 | FALSE |
| yo1ba | yo1b | 57523 | 0 | | 2 | 2 | 0.2000 | 0.1600 | 20 | 3.70 | 0.031416 | 0.020106 | 0.0953158 | FALSE |
| yo1ba | yo1b | 57523 | 0 | | 3 | 3 | 0.3700 | 0.3800 | 38 | 5.90 | 0.107521 | 0.113411 | 0.6517503 | FALSE |
| yo1ba | yo1b | 57523 | 0 | | 4 | 4 | 0.4800 | 0.2800 | 48 | 2.40 | 0.180956 | 0.061575 | 0.2910369 | FALSE |
| yo1bb | yo1b | 57523 | 0 | | 6 | 6 | 0.0900 | 0.1800 | 18 | 2.80 | 0.006362 | 0.025447 | 0.0445320 | FALSE |
| yo1bb | yo1b | 57523 | 0 | | 7 | 7 | 0.1600 | 0.1600 | 16 | 3.20 | 0.020106 | 0.020106 | 0.0643398 | FALSE |
| yo1bc | yo1b | 57523 | 0 | a | 11 | 11 | 0.1800 | 0.1800 | 18 | 5.60 | 0.025447 | 0.025447 | 0.1425025 | FALSE |
| yo1bc | yo1b | 57523 | 0 | b | 14 | 14 | 0.1600 | 0.1200 | 16 | 3.70 | 0.020106 | 0.011310 | 0.0581194 | FALSE |
| yo1bc | yo1b | 57523 | 0 | a | 13 | 13 | 0.1500 | 0.1500 | 15 | 2.00 | 0.017671 | 0.017671 | 0.0353429 | FALSE |
| yo1bc | yo1b | 57523 | 0 | b | 16 | 16 | 0.1000 | 0.0700 | 10 | 2.80 | 0.007854 | 0.003848 | 0.0163834 | FALSE |
| yo1bc | yo1b | 57523 | 0 | a | 10 | 10 | 0.2700 | 0.2300 | 27 | 4.70 | 0.057255 | 0.041548 | 0.2321871 | FALSE |
| yo1bc | yo1b | 57523 | 0 | a | 12 | 12 | 0.2000 | 0.1100 | 20 | 2.50 | 0.031416 | 0.009503 | 0.0511490 | FALSE |
| yo1bc | yo1b | 57523 | 0 | b | 15 | 15 | 0.3000 | 0.2900 | 30 | 3.70 | 0.070686 | 0.066052 | 0.2529648 | FALSE |
| yo1bc | yo1b | 57523 | 0 | a | 8 | 8 | 1.2000 | 1.0000 | 120 | 2.70 | 1.130972 | 0.785398 | 2.5870994 | TRUE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1bc | yo1b | 57523 | 0 | b | 17 | 17 | 0.4000 | 0.4300 | 43 | 2.60 | 0.125664 | 0.145220 | 0.3521487 | FALSE |
| yo1bc | yo1b | 57523 | 0 | a | 9 | 9 | 0.4000 | 0.3200 | 40 | 2.00 | 0.125664 | 0.080425 | 0.2060883 | TRUE |
| yo1bd | yo1b | 57523 | 0 | b | 23 | 23 | 0.1800 | 0.1800 | 18 | 3.10 | 0.025447 | 0.025447 | 0.0788853 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 24 | 24 | 0.1400 | 0.1400 | 14 | 2.60 | 0.015394 | 0.015394 | 0.0400239 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 20 | 20 | 0.0600 | 0.1100 | 11 | 5.20 | 0.002827 | 0.009503 | 0.0320599 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 19 | 19 | 0.0600 | 0.1000 | 10 | 4.00 | 0.002827 | 0.007854 | 0.0213628 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 18 | 18 | 0.1700 | 0.2600 | 26 | 2.50 | 0.022698 | 0.053093 | 0.0947386 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 25 | 25 | 0.2500 | 0.1900 | 25 | 4.50 | 0.049087 | 0.028353 | 0.1742404 | TRUE |
| yo1bd | yo1b | 57523 | 0 | b | 27 | 27 | 0.2000 | 0.1200 | 20 | 4.50 | 0.031416 | 0.011310 | 0.0961327 | TRUE |
| yo1bd | yo1b | 57523 | 0 | b | 21 | 21 | 0.3900 | 0.3600 | 39 | 6.10 | 0.119459 | 0.101788 | 0.6748018 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 22 | 22 | 0.2900 | 0.3900 | 39 | 4.70 | 0.066052 | 0.119459 | 0.4359506 | FALSE |
| yo1bd | yo1b | 57523 | 0 | b | 28 | 28 | 0.1600 | 1.2000 | 120 | 1.00 | 0.020106 | 1.130972 | 0.5755393 | TRUE |
| yo1bd | yo1b | 57523 | 0 | b | 26 | 26 | 0.2300 | 0.4200 | 42 | 4.50 | 0.041548 | 0.138544 | 0.4052062 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 37 | 37 | 0.1400 | 0.1400 | 14 | 2.40 | 0.015394 | 0.015394 | 0.0369451 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 29 | 29 | 0.0900 | 0.1300 | 13 | 2.50 | 0.006362 | 0.013273 | 0.0245437 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 31 | 31 | 0.0900 | 0.1300 | 13 | 4.50 | 0.006362 | 0.013273 | 0.0441786 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 30 | 30 | 0.0700 | 0.1100 | 11 | 4.60 | 0.003848 | 0.009503 | 0.0307090 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 33 | 33 | 0.1000 | 0.0900 | 10 | 3.00 | 0.007854 | 0.006362 | 0.0213235 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 32 | 32 | 0.2300 | 0.1800 | 23 | 3.00 | 0.041548 | 0.025447 | 0.1004916 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 34 | 34 | 0.2700 | 0.3400 | 34 | 2.30 | 0.057255 | 0.090792 | 0.1702545 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 35 | 35 | 0.2100 | 0.3100 | 31 | 2.20 | 0.034636 | 0.075477 | 0.1211240 | FALSE |
| yo1be | yo1b | 57523 | 0 | c | 36 | 36 | 1.0000 | 1.0000 | 100 | 0.60 | 0.785398 | 0.785398 | 0.4712385 | TRUE |
| yo1bf | yo1b | 57523 | 0 | | 38 | 38 | 0.8100 | 0.8100 | 81 | 2.30 | 0.515299 | 0.515299 | 1.1851884 | FALSE |
| yo1bg | yo1b | 57523 | 0 | | 41 | 41 | 0.1400 | 0.0900 | 14 | 2.00 | 0.015394 | 0.006362 | 0.0217555 | FALSE |
| yo1bg | yo1b | 57523 | 0 | | 40 | 40 | 0.1000 | 0.1300 | 13 | 2.00 | 0.007854 | 0.013273 | 0.0211272 | FALSE |
| yo1bg | yo1b | 57523 | 0 | | 45 | 45 | 0.0700 | 0.1000 | 10 | 4.60 | 0.003848 | 0.007854 | 0.0269156 | FALSE |
| yo1bg | yo1b | 57523 | 0 | | 39 | 39 | 0.2900 | 0.2300 | 29 | 2.00 | 0.066052 | 0.041548 | 0.1075995 | TRUE |
| yo1bg | yo1b | 57523 | 0 | | 44 | 44 | 0.2100 | 0.1000 | 21 | 7.40 | 0.034636 | 0.007854 | 0.1572130 | FALSE |
| yo1bg | yo1b | 57523 | 0 | | 42 | 42 | 0.7800 | 0.7600 | 78 | 1.40 | 0.477836 | 0.453646 | 0.6520370 | TRUE |
| yo1bg | yo1b | 57523 | 0 | | 43 | 43 | 0.5500 | 0.4700 | 55 | 3.30 | 0.237583 | 0.173494 | 0.6782771 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 50 | 50 | 0.1600 | 0.1900 | 19 | 3.40 | 0.020106 | 0.028353 | 0.0823803 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 47 | 47 | 0.0400 | 0.1600 | 16 | 9.20 | 0.001257 | 0.020106 | 0.0982689 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 52 | 52 | 0.0800 | 0.1500 | 15 | 3.70 | 0.005027 | 0.017671 | 0.0419913 | TRUE |
| yo1bh | yo1b | 57523 | 0 | | 83 | 83 | 0.0900 | 0.1500 | 15 | 4.20 | 0.006362 | 0.017671 | 0.0504696 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 84 | 84 | 0.1400 | 0.1000 | 14 | 2.70 | 0.015394 | 0.007854 | 0.0313845 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 51 | 51 | 0.1100 | 0.1400 | 14 | 4.60 | 0.009503 | 0.015394 | 0.0572633 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 46 | 46 | 0.1200 | 0.1100 | 12 | 2.00 | 0.011310 | 0.009503 | 0.0208130 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 53 | 53 | 0.1000 | 0.0800 | 10 | 2.80 | 0.007854 | 0.005027 | 0.0180327 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 48 | 48 | 0.0600 | 0.1000 | 10 | 4.70 | 0.002827 | 0.007854 | 0.0251013 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 81 | 81 | 0.2600 | 0.2700 | 27 | 2.20 | 0.053093 | 0.057255 | 0.1213832 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 49 | 49 | 0.2600 | 0.2600 | 26 | 2.30 | 0.053093 | 0.053093 | 0.1221136 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 80 | 80 | 0.2500 | 0.1800 | 25 | 2.60 | 0.049087 | 0.025447 | 0.0968945 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 55 | 55 | 0.2300 | 0.2300 | 23 | 3.20 | 0.041548 | 0.041548 | 0.1329521 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 82 | 82 | 0.2100 | 0.1700 | 21 | 2.50 | 0.034636 | 0.022698 | 0.0716675 | FALSE |
| yo1bh | yo1b | 57523 | 0 | | 79 | 79 | 0.2100 | 0.1600 | 21 | 2.50 | 0.034636 | 0.020106 | 0.0684278 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 57 | 57 | 0.3300 | 0.3300 | 33 | 4.40 | 0.085530 | 0.085530 | 0.3763311 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 56 | 56 | 1.7000 | 1.0000 | 170 | 1.30 | 2.269799 | 0.785398 | 1.9858776 | TRUE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1bh | yo1b | 57523 | 0 | | 78 | 78 | 0.4300 | 0.3400 | 43 | 6.70 | 0.145220 | 0.090792 | 0.7906400 | FALSE |
| yo1bh | yo1b | 57523 | 0 | d | 54 | 54 | 0.1800 | 0.4200 | 42 | 3.00 | 0.025447 | 0.138544 | 0.2459865 | FALSE |
| yo1bi | yo1b | 57523 | 0 | e | 75 | 75 | 0.1800 | 0.1600 | 18 | 3.30 | 0.025447 | 0.020106 | 0.0751625 | FALSE |
| yo1bi | yo1b | 57523 | 0 | e | 60 | 60 | 0.1100 | 0.1500 | 15 | 2.80 | 0.009503 | 0.017671 | 0.0380447 | TRUE |
| yo1bi | yo1b | 57523 | 0 | e | 70 | 70 | 0.0600 | 0.1200 | 12 | 7.70 | 0.002827 | 0.011310 | 0.0544280 | FALSE |
| yo1bi | yo1b | 57523 | 0 | e | 59 | 59 | 0.1100 | 0.1100 | 11 | 2.80 | 0.009503 | 0.009503 | 0.0266093 | FALSE |
| yo1bi | yo1b | 57523 | 0 | d | 58 | 58 | 0.2200 | 0.2600 | 26 | 7.90 | 0.038013 | 0.053093 | 0.3598691 | FALSE |
| yo1bi | yo1b | 57523 | 0 | e | 71 | 71 | 0.2200 | 0.1500 | 22 | 3.90 | 0.038013 | 0.017671 | 0.1085851 | TRUE |
| yo1bi | yo1b | 57523 | 0 | e | 74 | 74 | 0.2000 | 0.1900 | 20 | 3.50 | 0.031416 | 0.028353 | 0.1045953 | FALSE |
| yo1bj | yo1b | 57523 | 0 | | 76 | 76 | 0.1200 | 0.1600 | 16 | 2.90 | 0.011310 | 0.020106 | 0.0455531 | TRUE |
| yo1bj | yo1b | 57523 | 0 | | 85 | 85 | 0.0900 | 0.1600 | 16 | 4.50 | 0.006362 | 0.020106 | 0.0595528 | FALSE |
| yo1bj | yo1b | 57523 | 0 | e | 73 | 73 | 0.1300 | 0.0800 | 13 | 4.50 | 0.013273 | 0.005027 | 0.0411745 | FALSE |
| yo1bj | yo1b | 57523 | 0 | | 86 | 86 | 0.2300 | 0.2600 | 26 | 2.00 | 0.041548 | 0.053093 | 0.0946404 | FALSE |
| yo1bj | yo1b | 57523 | 0 | e | 72 | 72 | 0.3100 | 0.2100 | 31 | 4.80 | 0.075477 | 0.034636 | 0.2642706 | TRUE |
| yo1bj | yo1b | 57523 | 0 | e | 77 | 77 | 0.8000 | 1.0000 | 100 | 1.90 | 0.502654 | 0.785398 | 1.2236493 | TRUE |
| yo1ca | yo1c | 57523 | 0 | | 3 | 3 | 0.1900 | 0.1500 | 19 | 3.20 | 0.028353 | 0.017671 | 0.0736389 | FALSE |
| yo1ca | yo1c | 57523 | 0 | | 4 | 4 | 0.1100 | 0.1600 | 16 | 4.50 | 0.009503 | 0.020106 | 0.0666213 | FALSE |
| yo1ca | yo1c | 57523 | 0 | | 6 | 6 | 0.1800 | 0.2200 | 22 | 6.10 | 0.025447 | 0.038013 | 0.1935534 | FALSE |
| yo1ca | yo1c | 57523 | 0 | | 5 | 5 | 0.1200 | 0.2100 | 21 | 3.30 | 0.011310 | 0.034636 | 0.0758105 | FALSE |
| yo1ca | yo1c | 57523 | 0 | | 2 | 2 | 0.2500 | 0.3600 | 36 | 4.30 | 0.049087 | 0.101788 | 0.3243809 | FALSE |
| yo1ca | yo1c | 57523 | 0 | | 1 | 1 | 0.2600 | 0.4100 | 41 | 3.70 | 0.053093 | 0.132025 | 0.3424687 | FALSE |
| yo1cb | yo1c | 57523 | 0 | | 7 | 7 | 0.2000 | 0.6100 | 61 | 15.20 | 0.031416 | 0.292246 | 2.4598336 | TRUE |
| yo1cc | yo1c | 57523 | 0 | | 8 | 8 | 1.0000 | 0.8000 | 100 | 3.20 | 0.785398 | 0.502654 | 2.0608830 | TRUE |
| yo1cd | yo1c | 57523 | 0 | | 14 | 14 | 0.0800 | 0.1500 | 15 | 4.10 | 0.005027 | 0.017671 | 0.0465309 | FALSE |
| yo1cd | yo1c | 57523 | 0 | | 13 | 13 | 0.0700 | 0.1100 | 11 | 7.40 | 0.003848 | 0.009503 | 0.0494015 | FALSE |
| yo1cd | yo1c | 57523 | 0 | | 15 | 15 | 0.2900 | 0.2700 | 29 | 2.00 | 0.066052 | 0.057255 | 0.1233074 | FALSE |
| yo1cd | yo1c | 57523 | 0 | | 10 | 10 | 0.2300 | 0.2700 | 27 | 3.40 | 0.041548 | 0.057255 | 0.1679651 | FALSE |
| yo1cd | yo1c | 57523 | 0 | | 12 | 12 | 0.2200 | 0.2200 | 22 | 2.00 | 0.038013 | 0.038013 | 0.0760265 | FALSE |
| yo1cd | yo1c | 57523 | 0 | | 9 | 9 | 0.3400 | 0.2200 | 34 | 4.20 | 0.090792 | 0.038013 | 0.2704909 | FALSE |
| yo1cd | yo1c | 57523 | 0 | | 11 | 11 | 0.3000 | 0.4400 | 44 | 6.10 | 0.070686 | 0.152053 | 0.6793531 | FALSE |
| yo1ce | yo1c | 57523 | 0 | | 20 | 20 | 0.1900 | 0.1500 | 19 | 3.20 | 0.028353 | 0.017671 | 0.0736389 | FALSE |
| yo1ce | yo1c | 57523 | 0 | | 18 | 18 | 0.0800 | 0.1300 | 13 | 2.90 | 0.005027 | 0.013273 | 0.0265347 | FALSE |
| yo1ce | yo1c | 57523 | 0 | | 16 | 16 | 0.2600 | 0.2500 | 26 | 2.90 | 0.053093 | 0.049087 | 0.1481613 | FALSE |
| yo1ce | yo1c | 57523 | 0 | | 17 | 17 | 0.2300 | 0.2200 | 23 | 2.70 | 0.041548 | 0.038013 | 0.1074070 | FALSE |
| yo1ce | yo1c | 57523 | 0 | | 19 | 19 | 0.3100 | 0.2200 | 31 | 2.00 | 0.075477 | 0.038013 | 0.1134899 | FALSE |
| yo1cf | yo1c | 57523 | 0 | | 24 | 24 | 0.1100 | 0.1900 | 19 | 2.50 | 0.009503 | 0.028353 | 0.0473202 | FALSE |
| yo1cf | yo1c | 57523 | 0 | | 22 | 22 | 0.1100 | 0.1800 | 18 | 8.10 | 0.009503 | 0.025447 | 0.1415483 | FALSE |
| yo1cf | yo1c | 57523 | 0 | | 26 | 26 | 0.1200 | 0.1600 | 16 | 2.70 | 0.011310 | 0.020106 | 0.0424115 | TRUE |
| yo1cf | yo1c | 57523 | 0 | | 25 | 25 | 0.1200 | 0.0500 | 12 | 3.90 | 0.011310 | 0.001963 | 0.0258828 | FALSE |
| yo1cf | yo1c | 57523 | 0 | | 21 | 21 | 0.2000 | 0.1100 | 20 | 11.20 | 0.031416 | 0.009503 | 0.2291476 | FALSE |
| yo1cf | yo1c | 57523 | 0 | | 23 | 23 | 0.2400 | 0.3700 | 37 | 5.80 | 0.045239 | 0.107521 | 0.4430035 | TRUE |
| yo1cf | yo1c | 57523 | 0 | | 29 | 29 | 1.7000 | 0.4000 | 170 | 1.00 | 2.269799 | 0.125664 | 1.1977312 | TRUE |
| yo1cg | yo1c | 57523 | 0 | | 27 | 27 | 0.2500 | 0.1900 | 25 | 3.50 | 0.049087 | 0.028353 | 0.1355203 | FALSE |
| yo1cg | yo1c | 57523 | 0 | | 28 | 28 | 0.2000 | 0.2100 | 21 | 2.90 | 0.031416 | 0.034636 | 0.0957753 | FALSE |
| yo1ch | yo1c | 57523 | 0 | | 30 | 30 | 0.1400 | 0.1900 | 19 | 3.30 | 0.015394 | 0.028353 | 0.0721820 | FALSE |
| yo1ch | yo1c | 57523 | 0 | | 36 | 36 | 0.1600 | 0.1200 | 16 | 3.50 | 0.020106 | 0.011310 | 0.0549778 | FALSE |
| yo1ch | yo1c | 57523 | 0 | | 32 | 32 | 0.1600 | 0.0800 | 16 | 2.50 | 0.020106 | 0.005027 | 0.0314159 | FALSE |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yo1ch | yo1c | 57523 | 0 | 34 | 34 | 0.1200 | 0.1400 | 14 | 3.00 | 0.011310 | 0.015394 | 0.0400553 | FALSE |
| yo1ch | yo1c | 57523 | 0 | 31 | 31 | 0.1100 | 0.1400 | 14 | 3.20 | 0.009503 | 0.015394 | 0.0398354 | FALSE |
| yo1ch | yo1c | 57523 | 0 | 35 | 35 | 0.1100 | 0.0900 | 11 | 3.40 | 0.009503 | 0.006362 | 0.0269706 | FALSE |
| yo1ch | yo1c | 57523 | 0 | 33 | 33 | 0.1000 | 0.1000 | 10 | 2.50 | 0.007854 | 0.007854 | 0.0196349 | FALSE |
| yo1ci | yo1c | 57523 | 0 | 37 | 37 | 0.1600 | 0.0600 | 16 | 2.00 | 0.020106 | 0.002827 | 0.0229336 | FALSE |