

111 - Geo. Town Lake  
111120

Date - about 1953

## A HISTORY OF GEORGE TOWN LAKE

By Fred Beal

### HISTORY AND EARLY PLANTING

In 1894 the Bi-Metallic Mining Company of Philipsburg built a small dam on Flint Creek just about on the Granite-Deer Lodge county line about 16 miles west of the town of Anaconda. The purpose of the dam was to supply water for their smelting operations at Philipsburg. The area flooded was a large hay meadow with practically no timber, although the surrounding area was quite heavily timbered with lodge pole pine. In 1900 or 1901 this was purchased by the Anaconda Copper Mining Company, which needed the stored water for winter use at their copper smelter in Anaconda. In 1901 the Montana Power Company put in a power house below the dam to supplement their power system in this locality.

In 1919 the lake was enlarged somewhat by the addition of five feet to the dam, and in the 1940's the dam was strengthened, so the water level could be raised another three feet. The final result of this activity has given us a lake of about 3,000 acres with an average depth of about 18 feet. However, the water in the old channel near the dam is approximately 40 feet deep. In all probability there was a population of native Cutthroat trout in the stream before the lake was made; and, of course, they flourished under the new conditions. The Montana Fish and Game Department introduced Montana Grayling from waters east of the Continental Divide into the lake on July 2, 1912, and fishing reports of old timers tell us that they flourished and were removed by the burlap bag full by those who would drive to the lake with their teams and wagons. Cutthroat or Montana Black Spotted Trout were first introduced in 1913. Old records do not tell us the source of the eggs.

These two populations of fish thrived together in the relatively shallow water in which there was a very heavy production of plankton due to the flooding of this virgin land.

In 1919 traps were installed in Stewart Mill Creek and Flint Creek, and in 1920 eggs were taken from Eastern Brook that were introduced by the Department in 1915. The Anaconda Hatchery was established in 1909, and Eastern Brook eggs were the first eggs available by shipments from eastern states. In 1921 there were 9,951,000 Native Cutthroat eggs taken and 28,023,690 Grayling eggs taken. Steelhead Rainbow and Lake Superior Whitefish were introduced in subsequent years. While the Eastern Brook were introduced early, populations of these fish in the lake did not raise to any great height due to the fact that spawning conditions in the lake itself are very poor. Flint Creek was completely dry in the fall of the year; and eggs that were produced in the small natural run of that specie that entered Stewart Mill Creek were removed for use in other waters. The Whitefish that were introduced in 1913 did not flourish, but we do receive reports of an occasional fish caught at this late date which would seem to indicate that there has been successful spawning down through the years.

Rainbow were introduced into the lake first in 1912, and then planted in 1919, 1920, 1921. Early records show that Steelhead Rainbow were planted in 1924. These grew to an enormous size, but it was found that they were crossing with the Cutthroat Trout and producing hybrids. Action was taken in 1929 to remove them from the lake. As these large fish came into the traps, they were removed and hauled to neighboring waters. Some of them weighed as much as 17 pounds.

About 1929 it was the general opinion of fish culturists that new blood should be added to the Cutthroat population of the lake. On the basis of this thinking, 100,000 eggs were secured from Lake Tahoe, Nevada on an exchange basis and were introduced in the lake. In later years this same thinking persisted and eggs were secured from Henrys Lake, Idaho, and Yellowstone Lake in Yellowstone Park for introduction into the lake. In 1930 Georgetown Lake had reached its peak Cutthroat

egg production with a total take of 38,849,764, but this same heavy population showed its effects on the Grayling population, because that same year only 5,064,344 Grayling eggs were taken. In fact, in 1933 it was felt that it was necessary to secure Grayling eggs from another source to try and bring back the former large population, and Grayling eggs were secured from Rogers Lake near Kalispell for this purpose.

This heavy population of Trout and Grayling proved to be a boon to the people of neighboring communities during the depression years. Records show that the egg take of 38,849,764 on the year of high production in 1930 fell to 20,000,000 Cutthroat eggs in 1936, due solely to the heavy fishing pressure. Based on the above figures, the loss during these years to the traps alone indicate that 16,000 males and females with an average weight of 2 pounds each, or 16 tons of fish were taken, mainly for food purposes. In all probability the take was much heavier than this, because we know that a relatively small percentage of the total population enters the traps.

During the winter of 1936-37, the lake was pumped down almost 9 feet for water use at the smelter, which resulted in a severe winter kill. When the ice went off the following spring, thousands upon thousands of dead fish washed up on the shores. Eggs were taken from the few fish that entered the traps in the spring of 1937. Only 1,069,200 Cutthroat eggs were taken, while 9,696,000 Grayling eggs were taken. Why such a large number of Grayling survived when so many trout died we do not know.

After this catastrophe the Redhorse Sucker ( ) and Red Sided Shiner (*Richardsonius balteatus*) which were native to these waters increased to astronomical numbers, and it became necessary to remove as many as possible. Fyke nets were used, and 72 tons of Suckers and Shiners were taken. Following this, heavy plantings of Cutthroat fry and fingerlings were introduced into the lake from 1937 through 1943, but it seemed that nothing was accomplished in getting the

population back. So we started planting as many yearling as possible, which did not show results until the productiveness of the Anaconda station was expanded so that a program of planting  $1\frac{1}{2}$  pounds of fish -- Rainbow, Cutthroat, and Silver Salmon -- per acre could be maintained. Our total take of Cutthroat eggs in 1946 was still only 1,100,000 eggs; Grayling had fallen to 1,260,000 eggs, the latter very likely due to the heavy population of Shiners and Suckers. The take in 1950 had climbed to Cutthroat 4,500,000 and Grayling just under 4,000,000; in 1952 Cutthroat 5,500,000 and Grayling 3,750,000. This shows that our planting program of yearling had increased the population to about the level we thought necessary. While we did not feel that the lake had reached its capacity in population at this time, the winter kill of 1936-37 was still fresh in our mind, and we thought it necessary not to populate the lake to the point where low water would bring about a dangerous condition. With this in mind, we changed our planting program from  $1\frac{1}{2}$  pounds per acre to about .8 pounds per acre, which we followed until the summer of 1953.

The opening day of fishing in 1951-52-53 brought out from 1,000 to 3,000 anglers. We have changed our management policies accordingly and have changed the opening day from May 21 to July 1, because during this time the fish are swimming the shore line and are very susceptible to angling. Because of the difficulty encountered in our efforts to repopulate the lake with Cutthroat after the winter kill, we resorted to planting Rainbow, mainly because these fish were available at our hatcheries in yearling size, and by using Silver Salmon that die in their third or fourth year we felt that when our trout population reached the desired number we could easily eliminate the Salmon by discontinuing our plantings.

#### STOCKING POLICY--PRESENT AND FUTURE

Georgetown Lake is one of the most productive lakes in Western United States. Every effort should be made to utilize its productiveness to provide angling and

maintain it as a source of spawn for fish hatchery operations. This lake is also a controlled lake. Because of the small inlets with traps installed in each and the small areas it affords for natural reproduction, the hatchery can, by planting, determine the specie composition. I do not know what the outcome would be if an introduction of rough fish should occur. Perch, Chub, and other rough fish spawn promiscuously throughout the weed beds, which makes their control extremely difficult. Once they are introduced only a very heavy population of adult trout could keep them in check.

In 1953 a lenght-weight relationship study was started at the Flint Creek spawning station during the spawning run. This study on Cutthroat Trout, after continuing for a number of years, will give us information on the lake population that will help in making future planting decisions.

GRAYLING - This water has proven a good producer of Grayling. We intend stocking enough fry and fingerlings to maintain enough fish for the small number of fishermen who seek them and also enough to produce about 4,000,000 eggs for hatchery use. A study of Grayling eggs taken over the past five years would seem to indicate that our plants of one to one and one-half million fry in Flint Creek were adequate to bring up the population of Grayling. However, the 1953 run fell off sharply due to unknown reasons and only slightly over two million eggs were taken. At this time we plan to continue the above planting policy.

CUTTHROAT - Due to changing management trends it is undecided whether to continue our present policy of maintaining a high enough population to supply a small portion of themselves to the fishery and enough fish to produce 5,000,000 eggs. The population of Cutthroat in the lake is high enough to do this now, and it was necessary to plant the greatest share of our Cutthroat production at the Anaconda Station to accomplish it. After seeing the population of this specie raising so nicely in 1949 it was decided that we could cut down the number planted and still hold the gain we had made. So from plants around 44,000 yearlings in 1949 we dropped them to 11,000 in succeeding years.

RAINBOW - Since fishing pressures have increased these past few years and the Rainbow has provided about 50 per cent of the creel, and because it grows to such a large size, the sportsmen are demanding larger plants of this specie. If policy should demand that the lake be managed for the sole use of fishermen, then surely Rainbow have proven themselves the main fish to be planted.

SILVER SALMON - Silver Salmon, like Rainbow, contribute a very large proportion of the creel. While they were planted as a temporary expedient to be eliminated after the trout population has grown to a point that would withstand the fishing pressure, they have proven themselves an accepted member of the Georgetown fish family. Here again, if the lake is to be managed as a sport fishery, Silver Salmon along with Rainbow should be stocked to provide the bulk of the catch.

EASTERN BROOK - If at any time another source of Eastern Brook eggs can be found, the planting of this specie should be entirely eliminated. They add very little to the catch, and it is not deemed wise to try to build up the population too high for egg collection purposes. They are not generally accepted by the fishing public.

#### A SUMMARY OF THE HIGH DIFFERENTIAL IN SPECIE COMPOSITION

CUTTHROAT - It being the first trout inhabitant after the lake was formed naturally made great strides in population. It grew mainly by natural reproduction in the waters of Fling Creek and Stewart Mill Creek, and even after traps were installed it was the practice to throw enough green females up the stream from the traps to keep the lake stocked by natural reproduction. Prior to 1920, we find by the old records that only three plants of this specie had been made, and they totaled only 430,000 fry. In all probability natural reproduction would have kept this population high if egg removal had not taken place. Even so, the Cutthroat did not show too bad a population reduction until the depression years, when they were fished heavily. It seemed they could not stand the effect of both. This

population did not show any upward trend from plants of fry and fingerlings made after the winter kill of 1936-37 until 1946 and then only a slight one. It did show a definite up-turn after we started stocking a substantial number of yearlings. The controlling factor here was the Shiner population that consumed the planted fry, and the Sucker population that worked over the nests made in the spring areas of the lake.

EASTERN BROOK - While Brook Trout was one of the first introduced, it has never neared the point where one would have reason to believe that this specie would take over or become the reigning population as they have in many of our other lakes. There have been specimens taken by angling as large as five pounds. But the controlling factor here is that they have only Stewart Mill Creek to spawn in, and here their eggs have been taken each year. Flint Creek is dry at this time of the year. These fish have proven a menace to the natural reproduction and to the fish planted in Stewart Mill and Flint Creeks. It has been noticed in the past during the summer months that quite a few adults lie in the mouth of these creeks, fattening on the young of the spring spawners as they return to the lake.

GRAYLING - The initial plants of Grayling fry has proven that the necessary food for these small fish is abundant in this water. At the time these early plants were made the trout populations were probably not too high and mainly Cutthroat, and the competition for survival was not too keen. However, the spawn taking operations have shown that when the trout population is up, the Grayling population is down. As yet we have come to no conclusion on the exact number to be planted to even maintain a population. When the Shiner and Sucker population was high we made special efforts to bring back this specie. We planted fry from boats, planted in every area of the lake, planted small enclosures where Shiners and Suckers had been removed before stocking, but it all seemed fruitless. The stocking of yearling Grayling did bring about a small measure of success, but this was very limited. We finally started to plant Flint Creek above the traps with fry after the adult populations of trout had returned to the lake. This did show good results in the catch in the traps in 1950-51-52.

RAINBOW - This specie it seems can be planted to provide the biggest part of the take of the anglers. It has been found that by making a good proportion, at least 50 per cent by weight, of the annual plant Rainbow yearlings that a very good return can be expected. We do not believe that any other population has much effect on the survival of planted yearlings. However, they are very predacious and grow to large size, 10 to 15 pounds, and the only control to their survival and large, fast growth is the Shiner and other small fish populations. Rainbow were planted mainly because we had a good supply of them at our hatcheries, but we have found that eggs taken from Rainbow in Georgetown are not good. There has always been a very high mortality during the incubation stage.

SILVER SALMON - While Georgetown is not a land-locked lake in the true sense, the outlet being a pipe that draws the water from a deep part of the lake, we felt we could plant Silver Salmon and not lose too many of them by their normal migration-to-the-sea tendencies. At the time these were introduced, we were becoming alarmed at not being able to get any population back to a useful proportion. These fish planted at 3-4 inches do as well as the Rainbow. They utilize the abundant fresh water shrimp, and when they get older, they take readily to the Shiner population. Because these fish are such voracious feeders, they fill a large portion of the creels. Because they turn black and die in their third and fourth year, we feel that over-stocking might prove disastrous by fouling the soil of the lake bottom; also they are not too welcome by fishermen after they have passed their prime. The flesh at the mature stage is not too palatable, but up until this time it is said by many that they are the finest food fish in the lake. These fish ripen from December to February, and it is believed that there is no reproduction whatever. A high population of adult Rainbow might necessitate an increase in the size of Salmon planted. Rainbow have been caught near places where Salmon have been planted, and their stomachs were gorged with them.

REDHORSE, SUCKER, AND SHINER - The population of these species rose dramatically

after the winter kill of 1936-37. As far as can be determined these fish were native residents of the stream before the dam was built and in all probability contributed greatly to the food consumed by the large Cutthroat population of the 1920's. While the removal program afore mentioned took 72 tons of these fish from the lake, the great majority of these were Suckers. The mesh of the Fyke nets was too large to hold even the mature Shiner, which is 4-5 inches long. The heavy plants of Rainbow, Cutthroat, and Salmon have taken the population of Shiners down at an alarming rate. In 1949 they were so plentiful that fishermen could secure them for bait by throwing a wire basket with rope attached most any place along the shore, and when the basket was quickly withdrawn, it was almost a certainty to have some Shiners; but in 1952 people really had to work to get their bait. This shortage or visible lack of Shiners was one more condition that we felt indicated a necessity to cut down on our plants. Stomach analysis has shown that adult Silver Salmon, Rainbow, Cutthroat, and Brook Trout utilize the Shiners to the utmost as a source of food. This probably is one factor why we have been able to get such good results from our plants of yearling fish. It seems the Shiner inhabits the shoal area of the lake, and that is usually where the greatest majority of large Rainbow and Cutthroat are caught while using Shiners for bait. For a number of years we felt it was necessary to remove Suckers that entered the traps. This has been discontinued because we know that the young of this specie provides good food for the Salmon and trout populations.

#### MANAGEMENT PRACTICES

For a good many years during the early life of the lake a limit of 25 fish or 25 pounds and one fish was in effect. In 1930 this limit on the daily take was dropped to 15 fish or 10 pounds and one fish. Later the limit was changed to 10 fish or 10 pounds which remained unchanged until 1953, when the Commission ruled that 5 fish or 10 pounds and one fish might be taken during the winter fishing. This decrease in the limit of fish allowed seems to stem from increased fishing

pressures. These rulings are understood better after one has studied the extreme decline in fish entering the traps from 1930 when some 38,000,000 Cutthroat eggs were taken to 1936 when the take had dropped to 20,000,000. The Commission ruled out ice fishing for the winter of 1936-37, which was unfortunate in one sense, because the winter kill of that year almost destroyed the entire population that was left. This action by the Commission received severe criticism from organized Sportsmen's Clubs throughout the district. Although ice fishing is allowed at present, the season has been cut to from December 1 to February 28, on Saturday, Sunday, and legal holidays only, with a 5-fish daily bag limit. The big spring near the pumping station has been closed for years due to the fish congregating here during the spawning season. The small bay near the dam, on the highway side of the lake, has also been closed for the same reason. The area of the lake at the mouth of Flint Creek was closed for a number of years, but this restriction has been lifted, because Brook Trout lying at the mouth of the creek feed on the fry from natural reproduction and Grayling fry planted in the portion of the creek above the traps.

Fishing with Shiners for bait with Shiners secured from the lake is being allowed, but at this time a ruling is being presented to Sportsmen's Clubs to discontinue such practices.

On July 22, 1946, there were five lots of one hundred yearling Cutthroat in each lot planted in the lake. Each lot was marked differently, and each lot was planted in a different area of the lake. Our problem was to find out, if possible, if there was an area of the lake that did not contribute fish to the spawning traps at Flint Creek and Stewart Mill Creek. If such was the case, we thought that by dividing the lake, part for anglers' use and part to be used solely for egg production, it would be wise to do so. However, fin-clipped fish from every area of the lake planted entered Flint Creek in succeeding years, which indicates there is a general migration in the lake. Yet our opening day creel census that was started July 1953 did indicate that the majority of each specie caught were taken from the general area in which they were planted.

Weed growth in the lake during the summers of 1952 and 1953 has shown us it can be and probably will become more obnoxious as time goes on. This heavy weed condition is not only disliked by fishermen and boat enthusiasts, but are choking areas in the lake near the stream mouths and are preventing normal runs from entering the streams for spawning purposes. This is especially true at Stewart Mill Bay, where last year we made an effort to cut channels through the weeds with a power weed cutter, to let the Brook Trout have access to the stream. More experience with different types of equipment will be necessary before practical application on a large scale can be made.

#### CONCLUSIONS

Georgetown Lake is a lake rich in food production. Fishing pressures have increased tremendously from 1950 to 1953. This pressure can be met by stocking yearling fish. Because of figures on spawning operations, it is felt that we have not reached a population near what it once held. A stocking plan of  $1\frac{1}{2}$  pounds of yearling fish per acre brought the population up from the winter kill in 1937 and a take of 1,000,000 eggs to a take of 5,000,000 Cutthroat eggs in 1950. A stocking plan of .8 pounds per acre held this population until 1953, and we do not feel that the poor fishing results of the opening day was due to lack of fish in the lake. Egg take records of 1953 showed as many Cutthroat entered the traps this year as in 1952.

The number of Grayling that entered the trap was low in 1953 - for what reason, aside from a very late spring - we do not know. Grayling do not add too much to the fishing. Special effort has to be made to catch them. This was not true when the population was high.

Rainbow and Silver Salmon can be adequately stocked to provide the biggest share of the anglers' fishery. Brook Trout should be discontinued.

# ANNUAL BSC TAKE FROM GEORGETOWN LAKE

<u>Year</u>	<u>Cutthroat</u>	<u>Brook</u>	<u>Grayling</u>	<u>Rainbow</u>
1920		346,660		
1921	9,951,000		28,023,690	
1922	15,741,347	664,000	12,045,100	1,496,525
1923	246,950	735,553	21,762,800	37,530
1924	2,351,050	961,800	10,000,000	117,120
1925	23,027,259	787,000	17,229,400	479,006
1926	37,275,294	314,762	16,742,600	495,864
1927	31,528,136	1,020,608	15,976,854	1,243,328
1928	25,019,458	547,080	13,848,820	390,456
1929	24,392,050		12,031,080	520,040
1930	38,849,764	148,070	5,064,344	304,816
1931	30,342,398	13,320	1,593,271	218,430
1932	36,113,840	199,282	2,276,240	316,272
1933	13,820,121	167,139	3,423,420	308,440
1934	17,398,920	299,576	1,337,760	
1935	11,608,080		1,170,000	
1936	20,023,344		1,280,420	
1937	71,069,200		9,696,000	
1938	1,723,984		5,165,160	
1939	5,469,540		4,537,440	
1940	2,943,860		2,694,840	
1941	2,057,252		1,501,440	
1942	1,905,408		561,792	
1943	1,302,106		399,096	
1944	788,628		108,800	
1945	587,632		868,848	
1946	1,001,008		1,260,264	
1947	1,768,312		549,594	
1948	2,095,764		1,936,386	
1949	2,009,282		1,728,000	
1950	4,443,380	308,516	4,180,000	
1951	5,725,594	206,325	6,811,024	
1952	5,510,322	76,140	3,775,744	
1953	4,975,872	289,386	2,051,808	

fishing  
pressure  
winter kill

heavy Sucker  
& Shiner pop.

Started removal  
of Rainbow from lake

Rainbow yr. plants

started R.  
fry plants

all needed

# EARLY PLANTING DATA - GEORGETOWN LAKE

<u>Year</u>	<u>Grayling</u>	<u>Rainbow</u>	<u>Whitefish</u>	<u>Native</u>	<u>Brook</u>
1912	45,000	350			
1913	10,000		60,000	30,000	72,000
1914	50,000			100,000	
1915	:				100,000
1919		200,000		300,000	
1920	1,513,000	125,000		238,000	
1921	500,000	30,000		150,000	
1922	250,000				
1924		25,000		54,000 yr.	
1925				40,000 yr.	
1926				48,000 yr.	
1928				143,250 24,000 yr.	
1929				60,000 2,100,000	
1930				110,400	

All the above plants were fry or advanced fry with the exception of those marked yearlings.

# STATE OF MONTANA



## DEPARTMENT OF

## FISH AND GAME

910 Grand Avenue  
Missoula, Montana  
June 15, 1953

Mr. Fred Beal  
Anaconda Fisheries Station  
Anaconda, Montana

Dear Fred:

I have summarized the length and weight measurements we took on the spawning cutthroat trout June 10, at Georgetown Lake. These figures may not be entirely accurate so I'll check them on a calculator at the first opportunity. The adding machine we have at Missoula is not dependable.

If the weights seem a little low; it is because of the method we used to suspend the fish in a dip net with the handle touching the trap wall.

### 55 males

average total length  
average weight

17 inches

1.6 pounds

Condition factor -- 34.4

### 51 females

average total length  
average weight

19 inches

2.5 pounds

condition factor -- 37.2

Sincerely,

Jack E. Bailey

## Age - Growth Study

## GEORGETOWN LAKE

1953

Sp.	No.	T.L.	Wt.	Sex	Date	Age	I	II	III	IV	V
Cutthroat	23629	10.5	.38	M	6-10-53	II A	5.7	10.5			
	23630	13.0	.63	M	6-10-53	II +	4.5	10.0			
	23631	13.5	.88	M	6-10-53	VII +	2.7	7.3	13.0		
	23632	14.5	.38	M	6-10-53	III +	3.6	6.9	12.6		
	23633	15.0	1.38	M	6-10-53	II +	5.9	11.5		(Bull at 2.0)	
	23634	15.5	1.25	M	6-10-53	III +	3.6	9.5	13.2		
	23635	17.0	1.63	M	6-10-53	IV A	3.5	7.5	13.4	17.0	
	23636	17.0	1.63	M	6-10-53	(No scales)					
	23637	17.4	1.75	M	6-10-53	IV +	4.1	8.4	13.0	16.5	
	23638	18.0	2.13	M	6-10-53	IV A	3.2	7.8	14.4	18.0	
	23639	18.1	1.88	M	6-10-53	(All Regenerate)					
	23640	19.0	2.25	M	6-10-53	IV A	3.6	10.4	15.4	19.0	(one scale)
	23641	19.0	2.25	M	6-10-53	(No scales)					
	23642	19.25	2.38	M	6-10-53	(No scales)					
	23643	19.5	2.50	M	6-10-53	(No scales)					
	23644	19.5	2.88	M	6-10-53	(No scales)					
	23645	20.0	2.75	M	6-10-53	(No scales)					
	23646	20.5	2.50	M	6-10-53	IV +	2.5	5.6	10.9	16.0	19.7
	23647	17.0	2.00	F	6-10-53	IV A	4.0	8.5	14.0	17.0	
	23648	17.0	2.25	F	6-10-53	IV +	2.5	6.6	12.2	16.1	
	23649	17.0	2.13	F	6-10-53	V A	3.0	8.0	11.4	14.7	17.0
	23650	17.25	1.75	F	6-10-53	III +	5.5	11.9	15.9		
	23651	17.5	1.88	F	6-10-53	IV A	2.5	8.4	13.9	17.5	
	23652	18.0		F	6-10-53	III +	3.8	11.3	16.6		
	23653	18.5	2.25	F	6-10-53	IV +	5.4	10.2	14.5	17.4	
	23654	19.0	2.50	F	6-10-53	IV A	4.2	9.2	15.5	19.0	
	23655	19.0	2.50	F	6-10-53	IV A	3.8	9.6	15.7	19.0	
	23656	19.0	2.75	F	6-10-53	IV +	3.5	9.3	15.3	18.1	
	23657	19.5	3.00	F	6-10-53	V A	2.8	8.0	13.7	17.3	19.5
	23658	20.0	3.00	F	6-10-53	V A	3.2	8.4	14.3	18.0	20.0
	23659	20.5	3.25	F	6-10-53	IV A	3.7	9.7	16.9	20.5	
	23660	21.0	3.38	F	6-10-53	V A	3.3	8.0	13.8	18.4	21.0

No. Average  
Summation  
Average

25	25	22	17	5
94.1	222.5	309.6	299.5	97.2
3.8	8.9	14.1	17.6	19.4