

INSTITUTE FOR FISHERIES RESEARCH
UNIVERSITY MUSEUMS
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN

December 14, 1931

REPORT 110

SUGGESTIONS FOR CONTINUATION OF FISHERIES INSTITUTE ACTIVITIES THROUGH THE
REMAINDER OF THE FISCAL YEAR 1930-1931, SO AS TO MATERIALIZE ON FIELD WORK
ALREADY DONE

Prepared by the Director of the Institute at the request of Director Hogarth.

The program and estimates here presented have been conscientiously pared to
minimum, on which the remainder of the work for the year can be carried on
without undue loss and inefficiency.

The program has been drawn up so as to cover four phases of the work, as follows:
(1) Work to be postponed; (2) Work to be taken on by other agencies; (3) Work to
be done by Institute staff without specific allotment of funds, and (4) Work to
be done at Institute expense.

I. WORK TO BE POSTPONED

1. Field equipment:
Purchases to be suspended until or unless field work for 1933 is provided for.
2. Preparation of fish booklets and fish book for use by sportsmen and schools:
Postponed.
3. Publication purchases (reprints, etc.):
Suspended.
4. Selection experiments:
Work toward the production of superior brood stocks to be postponed.
5. Fishcultural experiments:
Postponed.
6. Fish disease and hatchery investigations:
Postponed.
7. Bait minnow investigations:
This work, especially on danger of introducing goldfish as bait, postponed.
8. Forage fish experiments:
Experiments made in cooperation with Mr. Schull to be reported on by Director
without further expense; other experiments along this line to be postponed.

*OK by Director
12-14-1931 (W)*

*Agreed with Hubbs. to
Pay \$900 per mo. Dec. 1-1931 to
Jan 30-1932 - (\$6300)*

II. WORK TO BE TAKEN OVER BY OTHER AGENCIES

1. Purchase of formaldehyde, jars, etc.;
To be assumed by University.
2. Expenses of installations, operations, etc., for Institute experiments being conducted in Aquarium:
To be assumed by University.
3. Fish hybridization experiments:
To be financed solely by University.
4. Tern-gull investigations, Saginaw Bay:
Services of assistant in completion of this work to be furnished free.
5. Determination of fish parasites, etc.:
What work is called for along this line it is hoped will be done gratis by the Zoology Department of the University.
6. Clam investigations:
Surveys of mussels of certain waters of the state to be continued under expense of University Museum.
7. Investigations on lake improvement (cover, weeds, etc.):
Work to be restricted to limits of support by Izaak Walton League.
8. Perch investigations:
Investigation of problems of dwarfing ~~and~~ and of races in perch to be continued on a small scale by Director and one of League Fellows.
9. Smelt investigations:
Further studies (of food, etc.) to be made by Bureau of Fisheries, Dr. Creaser or the Institute, without further expense for the year.
10. Motor boat investigations:
Studies of effects of motors on fish life of lakes proposed to be done at complete expense of boat manufacturers, through the National Headquarters of the Izaak Walton League,--or if this falls through, not to undertaken this year.
11. Investigations of private waters:
To be done as formerly entirely at private expense, plus overhead, the returns to be applied to the Institute's work in public waters.

III. WORK TO BE DONE BY INSTITUTE STAFF WITHOUT SPECIFIC ALLOTMENT OF FUNDS

1. Identification and education service:
The mass of requests for decisions on identification of fish species, from the Department and from individuals, and the numerous queries received regarding all phases of fish life, to be handled as usual by the staff.
2. Tagging experiments:
Reports to be prepared by regular staff, with assistance of McCrimmon, and any new records tabulated, without special allotment of funds.

3. Growth of fishes:

Some trout growth studies to be completed by Dr. Greeley, with idea of publication without expense to Institute; promised report on size and growth of dwarf sunfish species to be prepared by staff. The service of McCrimmon are needed for the mounting of the scales necessary for these investigations.

4. Nutrition experiments:

Two experiments already completed and one being finished off to be reported upon without special call for funds.

IV. WORK TO BE DONE AT INSTITUTE EXPENSE (WITH ESTIMATES)

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|---|---------------|---------|
| 1. Telephones and telegrams | \$50.00 | |
| Express | <u>35.00</u> | \$85.00 |
| 2. Miscellaneous office expenses: | | |
| Printing of cards, etc. (about half done already, not included in Dec. 1 statement of funds) | 140.00 | |
| Additional expenses, rough estimate | <u>150.00</u> | 290.00 |
| 3. Field expenses (conferences at Lansing, plus a very few field trips called for to complete reports to date, plus allowance for a few special trips on request from Department) | | 300.00 |
| 4. Clerical work: | | |
| Typing of reports and cards; letter writing; filing, etc.: | | |
| Secretary, 7 mos. at \$100 | 700.00 | |
| Extra typing..... | <u>300.00</u> | 1000.00 |
| 5. Predator investigations (food of herons, kingfishers, bitterns, other birds, mink, etc., and their effects on fish life, especially trout): | | |
| Services of J. Clark Salyer, 7 mos. at 70.00 | | 490.00 |
| (Note: This service will include also a progress report of some initial work on shade improvement in trout streams) | | |
| 6. Cover improvement in streams: | | |
| Reports to be written on 1929-1930 work, and bulletin on methods for popular use to be prepared, at request of Mr. Loutit and others: | | |
| Services needed: Mr. Clarence Tarzwell, 7 mos. at 70.00 | <u>490.00</u> | |
| Preparation of sketches to illustrate bulletin | 100.00 | |
| Zinc etchings to be made therefrom | 100.00 | |
| Printing of bulletin | <u>260.00</u> | |
| | | 950.00 |
| 7. Lake survey: | | |
| (Services of three men provided by Izaak Walton League through Mr. Harry M. Harper free of charge to the Department) | | |
| Map-maker and geographer, 7 mos. at 50.00 . . . | 350.00 | |
| Assistant to color maps, etc., 5 mos. at 20.00 | <u>100.00</u> | 450.00 |

8. Trout investigations (investigations on growth, movements, nursery streams, stream survey, temperatures, food, trout populations and carrying capacities, planting recommendations, etc.): Services of Dr. John R. Greeley, 7 mos. at 83.33	\$583.33
9. Director (general reports and supervision of entire work): Seven months at \$83.33 (hardly exorbitant)	583.33
10. General assistant (miscellaneous laboratory and field help; especially needed this winter in growth and migration investigations): Services of Gerald McCrimmon, 7 mos. at 133.33 (full time)	933.34
Additional: field expenses and hiring of helper in November (item not accounted for in statement as of Dec. 1)	167.00
11. Pollution and transportation experiments: Work already completed by Krull and by Hubbs to be reported on without further expense. Extra help of chemistry student to assist Director in completing work asked for by Mr. Adams of Stream Control Commission, and to complete work on Shakespeare buckets and on an oxygen-supplied fish-can designed by Director, 2 mos. at \$50.00	100.00
Tinshop labor making sample cans	<u>50.00</u>
	150.00
12. Printing of two reports with zinc etchings on identification of blue pike and of menominee whitefish, requested by Mr. Westerman ..	25.00
13. Creel census: 1928 and 1929 records have already been tabulated by streams and lakes, but not yet summarized by counties, etc. Estimated time required to do this by half-time clerk, 1 mo. at 60.00	60.00
1930 and 1931 records not yet tabulated. Estimated time required— To prepare classified list of lakes and streams of state (valuable in itself), 2 mos., half-time, at 60.00	120.00
To punch cards and operate tabulating machine (a great time saver offered free by University) 300 hrs. at 65.¢	<u>195.00</u>
	375.00
TOTAL (rate of 911.57 per month)	6382.00
STATEMENT OF APPEARANCES as of December 1 (a few items not included in report of University bookkeeper at that time placed in estimates above)	609.41
VOUCHER RECEIVED	5000.00
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TOTAL ESTIMATE FOR FISCAL YEAR 1930-1931	\$11991.41

Note: This final figure represents 44 % less than the budget for the Institute approved by the Commission in February, and 25 % less than Institute allotment for 1929 and 1929-1930 (rate of \$16000 per annum).