

GENERAL SUMMARY OF THE RESULTS.

The fish fauna of the whole region traversed is poor in comparison with that of the streams of the Ohio Valley. I obtained in all but 65 species, about 20 per cent of which were new to science. They belong to 14 families and 37 genera. In the Winnipeg system, *i. e.*, in the whole region drained by the tributaries of Lake Winnipeg, only 3 of the 10 families characterizing the Neartic region were obtained, and the Pacific Slope contains only two.

The following notable additions to the knowledge of the North American fauna were made by these explorations:

1. A species of *Pautosteus* (*P. columbianus* = *P. jordani* of the Missouri) discovered on the Pacific Slope.
2. *Noturus flavus* found at the base of the Rockies at Craig, Mont.
3. Four new species of *Notropis* added to the east-Canadian fauna.
4. Two new species of *Ayosia* added to the Pacific fauna.
5. A new species of whitefish (*Coregonus coulteri*) discovered in the Rocky Mountain streams of a restricted region in British Columbia.
6. The family of *Percopsidae* found to have a representative on the Pacific Slope in the new genus *Columbia*.
7. Several species of *Etheostoma* found in Canada, among them two new species.
8. One new *Cottus* (*C. onychus*) added to the fauna of the Saskatchewan.
9. A new *Cottus* (*C. philonips*) discovered in the Kicking Horse at Field.
10. A species of *Lota* reported both in the Columbia and the Fraser. A specimen since secured from the Columbia.
11. It was discovered that the fins of the fishes of the Pacific Slope vary from the fins of fishes of the Atlantic Slope in definite directions.
12. The extent of variation between the species of any given family of fishes on the Pacific coast was found to be greater than that between the species of the same family on the Atlantic Slope.
13. *Richardsonius* was proved to be a subgenus of *Leuciscus*. Its species were found to vary directly with the locality. Each locality examined has a variety which in the aggregate differs from the variety of every other locality.

NOTE.—Since this paper has been put in type Drs. Jordan and Evermann have placed the proofs of the Fishes of North America in my hands, and I have adopted all the changes in nomenclature suggested by them up to *Cyprinidae*. Dr. Jordan has also made many suggestions regarding the chapter on "Structural Peculiarities," etc., p. 122. I have not been able to give these suggestions the attention they merit, but they will receive due consideration in a more detailed study of this subject.