

ON THE GENERIC RELATIONS OF *BELONE EXILIS* GIRARD.

By DAVID S. JORDAN and CHARLES H. GILBERT.

The "needle-fish" (*Belone exilis* Girard), of the California coast, differs from the type of the genus *Belone* in the development of the gill-rakers. In *Belone vulgaris* the gill-rakers are well developed, long, and slender, and a patch of teeth is present on the vomer. In *Belone exilis* the gill-rakers are entirely wanting, and there are no vomerine teeth. The gill-rakers are also wanting in the Atlantic species, *Belone longirostris* (Mitch.), *Belone latimana* Poey, *Belone melanochira* Poey, *Belone notata* Poey, and *Belone hians* (Cuv. & Val.), and probably also in *Belone cantraini*, which is the type of the genus *Tylosurus* Coeco. The generic name *Tylosurus* may therefore be provisionally adopted for the species of *Belone* without gill-rakers. The caudal keel on which the genus *Tylosurus* was based, and which is developed in *T. exilis* as in *T. cantraini*, has apparently no systematic importance.

BLOOMINGTON, IND., December 2, 1880.

## NOTES ON A COLLECTION OF FISHES FROM UTAH LAKE.

By DAVID S. JORDAN and CHARLES H. GILBERT.

A short visit to Provo, Utah, on Utah Lake, enabled one of the writers to make a small collection of the fishes of that locality. This collection has been since supplemented by an excellent series of the different species, presented to the United States National Museum by Peter Madsen and sons, fishermen at Provo. Four of the thirteen species obtained seem to be new to science.

1. *Cottopsis semiscaber* Cope.—Bull-head.

Two specimens. Professor Cope says of his types: "Skin prickly above the lateral line, smooth below it posteriorly." Our specimens are villous above and below, as in *Cottopsis asper*, from which *C. semiscaber* differs chiefly in the less number of rays in the vertical fins.

The genus *Cottopsis* is distinguished from *Centridermichthys* mainly by the absence of a slit behind the fourth gill, which, as I am informed by Dr. Günther, is present in *Centridermichthys fasciatus*. *Centridermichthys uncinatus*, of the North Atlantic, agrees with *Cottopsis* in this respect, and should probably be referred to it. The American genera of Cot-