

NOTES ON ANTELIOCHIMÆRA AND RELATED GENERA OF CHIMÆROID FISHES.

By BARTON A. BEAN and ALFRED C. WEED,
Of the Division of Fishes, U. S. National Museum.

In a paper by Mr. Shigeho Tanaka,^a recently received, he proposes *Anteliochimæra* as a new genus of Chimæroid fishes, based on a single adult male which he describes as a new species, *Anteliochimæra chæti-rhamphus*. This specimen was taken at a depth of about 400 fathoms and bears a considerable external resemblance to *Rhinochimæra pacifica*, with which it was carefully compared, and from which it differs in many characters mentioned in the description. The genus *Harriotta* is not referred to by the author, although the points in which his proposed new genus differs from *Rhinochimæra* are precisely those in which *Harriotta* differs from *Rhinochimæra*. In *Harriotta*, if the dental plates are viewed by simply parting the lips instead of separating the jaws, the appearance is as described for *Anteliochimæra*, and the lack of armature of the supracaudal fin^b is the same in both. There-

^a Descriptions of one new genus and ten new species of Japanese fishes. Journ. College of Science, Imperial University, Tokyo, Japan, vol. 27, article 8, 1 plate, October 10, 1909.

^b A review of the literature reveals the fact that there is a wide diversity of opinion as to the nomenclature of the two vertical fins that go to make up the functional tail of a chimæroid. Some authors refer to them as third dorsal and anal, thus conveying the impression that all fishes of this group entirely lack a caudal fin. Others refer to the fins, respectively, as upper and lower caudal lobe, and thus apparently homologize them with the two lobes of the tail of a shark. It seems to us that neither of these views is in entire accord with the facts and that a proper interpretation would make the ventral of the two fins the homologue of both lobes of a shark's tail and the dorsal one not represented in the adult condition of most living fishes, although present in the embryonic condition of many. Further, it does not seem to us that the mere fact that these fins are not developed to the extreme end of the caudal filament, and, presumably, of the notochord, should militate in any way against regarding them as truly caudal fins, for in the larval gar (*Lepidosteus*) the notochord extends to a considerable distance beyond the fin, which ultimately becomes the caudal fin of the adult. For these reasons we prefer the names *supracaudal* and *infracaudal* fins for the dorsal and ventral of these two, respectively, as indicating clearly not only their position, but also their true homology. See Notes on the North American Ganoids, by Prof. Burt G. Wilder in Proc. Amer. Ass. Adv. Sci., pt. 2, 1876, pp. 151-166; also, The development of *Lepidosteus*, by A. Agassiz in Proc. Amer. Acad. Arts Sci., vol. 14, 1878 (1879), p. 65.

fore, unless a further examination of specimens should bring out points of difference not indicated in the original description, it is evident that this fish must be assigned to the genus *Harriotta* and stand as the first record of an adult male. In the young males of *Harriotta raleighana* the claspers are very short and the frontal organ is not developed, although it is plainly indicated in the largest specimen. There are some minor differences in comparative measurements and in the number of tritons that go to make up the dental lamina which appear to separate the two forms.

The genus *Harriotta* therefore, as herein shown, is represented by the following species:

Harriotta raleighana Goode and Bean. Snout shorter, vomerine dental lamina with 8 or 9 tritons on its outer edge. North Atlantic. (See pl. 38.)

Harriotta chætirhamphus (Tanaka). Snout longer, vomerine dental lamina with 6 or 7 tritons on its outer edge. North Pacific, Japan. (See pl. 39.) The tritons in each case form a cutting edge.

So far as we are aware, the following is a complete bibliography of the known species of long-snouted chimæroids, which have been, or should be, referred to the genus *Harriotta*.

Immediately after returning galley proofs to the editor we received the report on the *Holocephali* or Chimæras of the Irish Atlantic Slope by E. W. L. Holt and L. W. Byrne,^a and from their footnote on page 4 it will be seen that they agree with us in making *Anteliochimæra* a synonym of *Harriotta*. The note reads as follows: "The Pacific *Anteliochimæra chætirhamphus*, Tanaka (1909), the description of which reached us too late for discussion in the text, appears to us to be a *Harriotta* closely allied to its Atlantic congener, but probably distinguished at comparable sizes by a larger eye and longer second dorsal."

G. B. GOODE and T. H. BEAN.

On *Harriotta*, a new type of Chimæroid fish from the deeper waters of the north-western Atlantic.

Proc. U. S. Nat. Mus., vol. 17, pp. 471-473, pl. 19. January 26, 1895.

In this publication the authors describe *Harriotta raleighana* as a new genus and species, from four specimens, an adult female and three young males, taken off the New England coast at depths ranging from 700 to 1,000 fathoms.

ANONYMOUS (E. D. COPE, ?).

New deep-sea fishes.

Amer. Nat., p. 281. March, 1895.

This short note refers to the volume of the Proceedings of the U. S. National Museum containing the description of *Harriotta* and other deep sea forms, and criticizes the commemoration of such obscure writers as Harriott and Rondelet.

ANONYMOUS (E. D. COPE, ?).

More deep-sea fishes.

Amer. Nat., p. 376. April, 1895.

Again refers to *Harriotta* and calls attention to the plate which is copied from the original figure.

^a Fisheries, Ireland, Sci. Inv., 1908, vol. 4 (1910), pp. 1-26, pls. 1-4.

G. B. GOODE and T. H. BEAN.

Oceanic Ichthyology.

Spec. Bull. U. S. Nat. Mus., no. 2, p. 33, figs. 37-40. June, 1895.

Harriotta is here described as new and no mention made of any other place of publication.

K. MITSUKURI.

On a new genus of the Chimæroid group, *Harriotta*.

Zoological Magazine, organ of the Zoological Society of Tokyo, vol. 7, no. 80, p. 97. June, 1895.

A preliminary notice of *Harriotta pacifica* (*Rhinochimæra pacifica*). Two figures are published, one a very poor copy of the lateral view of *H. ralighana*, shown in the plate in the American Naturalist for April, 1895; the other an equally poor figure of *Rhinochimæra pacifica*. No description is published with the figures.

D. S. JORDAN and B. W. EVERMANN.

Fishes of North and Middle America.

Bull. 47, U. S. Nat. Mus., p. 97, pl. 19, fig. 42. March, 1896.

Only one figure, that of the youngest specimen, is given and reference is made only to the place of publication in Oceanic Ichthyology.

S. GARMAN.

Genera and families of the Chimæroids.

Proc. New Engl. Zool. Club, vol. 2, pp. 75-77. November 2, 1901.

This is a preliminary note on dissections of *Rhinochimæra pacifica*. One new genus, *Rhinochimæra*, and two new families, *Rhinochimæridæ* and *Callorhynchidæ*, are proposed and preliminary diagnoses given.

D. S. JORDAN and H. W. FOWLER.

A review of the Elasmobranchiate fishes of Japan.

Proc. U. S. Nat. Mus., vol. 26, pp. 593-674. March 30, 1903.

On page 668, *Rhinochimæra pacifica* is mentioned as not yet satisfactorily described and Mitsukuri's original note is copied.

S. GARMAN.

The Chimæroids (Chismopnea Rafinesque, 1815; Holocephala, Müller, 1834), especially *Rhinochimæra* and its allies.

Bull. Mus. Comp. Zool., vol. 41, no. 2, 15 pls. March, 1904.

A report on a dissection of *Rhinochimæra pacifica* and a comparison of this species with other members of the group. This paper, mainly on the character of the teeth, classes *Rhinochimæra* as the most primitive of known living chimæroids.

BASHFORD DEAN.

Notes on the long-snouted chimæroid of Japan, *Rhinochimæra pacifica* (Mitsukuri).

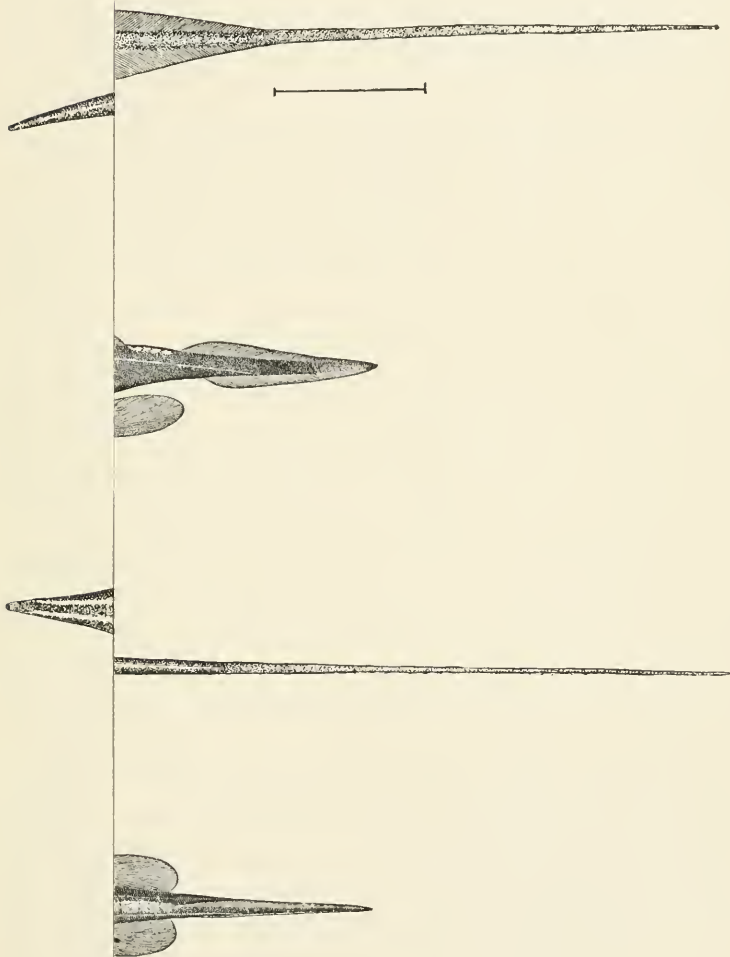
Journ. Coll. Sci., Imp. Univ., Tokyo, Japan, vol. 19, art. 4, 2 pls. May or June, 1904.

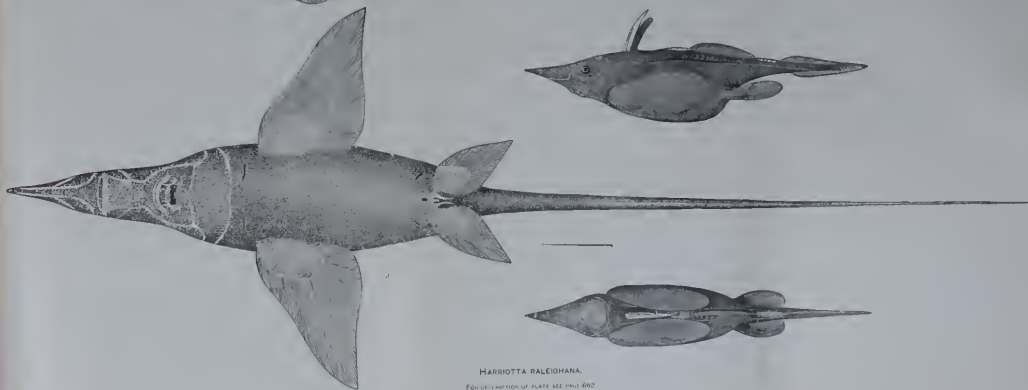
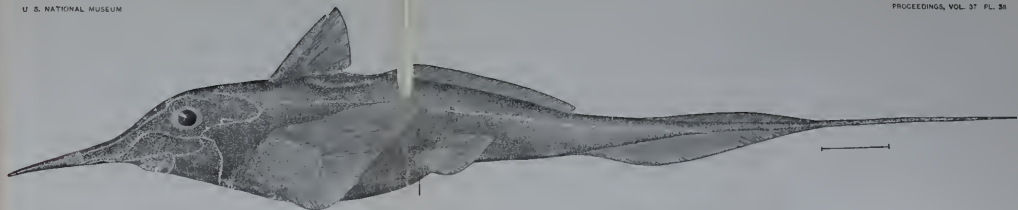
At the time of writing this paper, the author had not seen the works of Garman on the same subject, but before it was published he had received a copy of the preliminary notice in the Proceedings of the New England Zoological Club. He accepts Mr. Garman's conclusions as to the generic distinctness of *Harriotta* and *Rhinochimæra*, but takes exception to many of his other conclusions. Doctor Dean holds that there is no relation between the dental plates of *Harriotta* and those of *Rhinochimæra*, and that the two represent very different lines of descent. He therefore places them in different families, *Rhinochimæridæ* and *Harriottidæ*.

SHIGEHO TANAKA.

Journ. Coll. Sci., Imp. Univ. Tokyo, Japan, vol. 27, art. 8, 1 pl. October 10, 1909.

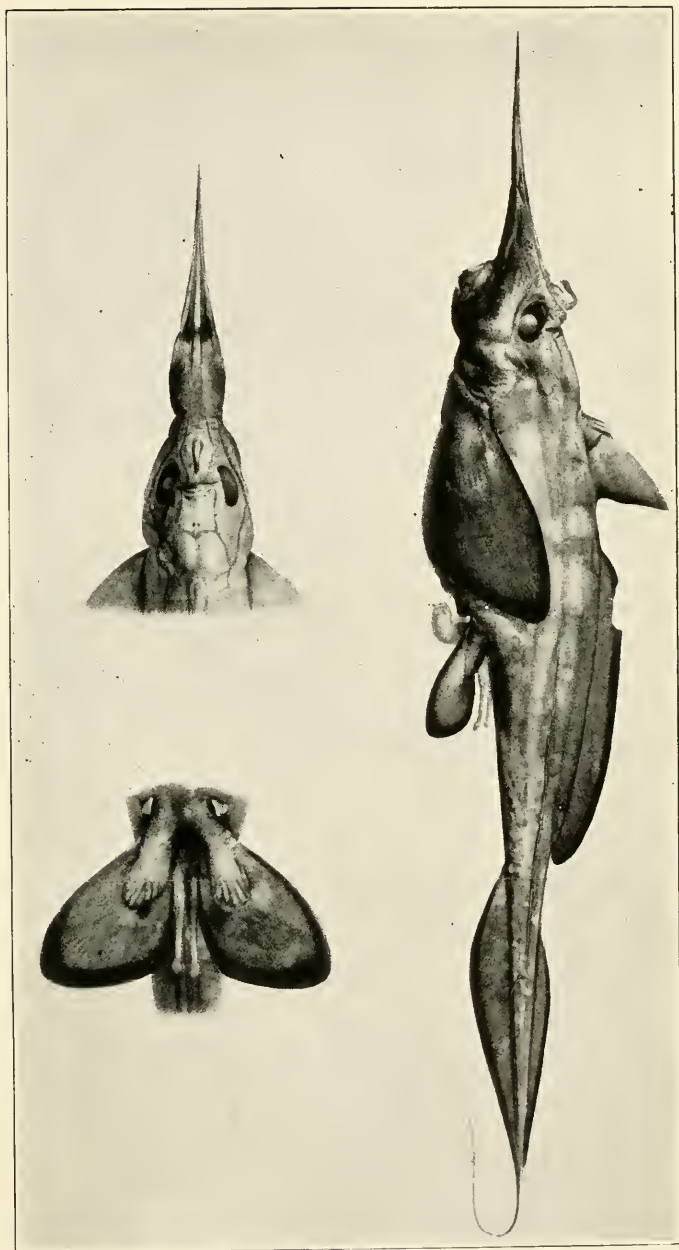
Description of one new genus and ten new species of Japanese fishes.





HARRIOTTA RALEIGHIANA.

FOR DEPARTMENT OF PLATE SEE PAGE 692



"ANTELIOCHIMÆRA CHÆTIRHAMPHUS."

FOR DESCRIPTION OF PLATE SEE PAGE 662.