

NOTE ON *CIRRHINA AFGHANA* GÜNTHER.

(Pisces-Cyprinidae).

By LEO S. BERG.

In his report on the fishes brought by the Afghan Delimitation Commission Günther¹ described a new Cyprinoid fish under the name *Cirrhina afghana*. Numerous specimens of this fish were collected "at Nushki, N. Baluchistan, and in the small river at Kushk, Badghis, N. W Afghanistan."

The occurrence of the Indian genus *Cirrhina* as far north as in the drainage system of the Murghab, Transcaspiya, is very interesting, if Günther's determination be correct.

According to the description the formula of *C. afghana* is as follows : *D.* 13-14, *A.* 10, *U* 40, pharyngeal teeth 4·3·2 2·3·4 or 5·3·2—2·3·5. One pair of barbels only at the angles of the mouth. Intestinal caecal with numerous convolutions. Peritoneum deep black. Lower lip transverse, generally covered with a horny substance which forms a sharp edge. Last single ray of the dorsal fin distinctly serrated along its basal portion.

Günther was not quite sure that the above named species belonged to the genus *Cirrhina*. He remarks : "This species differs in several points from the typical *Cirrhina*. In the latter the snout is more depressed, and the covering of the lower jaw by horny substance is the exception ; of the barbels the upper ones are more frequently developed than the lower ; the anal fin has a ray or two less than in the present species, and finally the nakedness of the abdomen is a character by which our species seems to differ from all the others."

N. Zarudny brought in 1898 to the Museum of Zoology, Academy of Sciences, St. Petersburg, numerous specimens of *Cirrhina afghana* from South Persia (Basman, No. 11710 ; Bampur, No. 11711) which allow us to decide the question as to the generic position of this species.

The type of *Cirrhinus* or *Cirrhina* Cuvier 1817 is *Cyprinus cirrhosus* Bloch 1795, from the Malabar coast ; this species has no osseous ray in the dorsal, *D.* III—IV 14—15, *A.* III 5, *U* 42-44, barbels 4, a tubercle at the symphysis of the lower jaw, peritoneum light, intestine short, no scaleless furrow in front of the dorsal. Scales distinctly elongate. It is obvious, therefore, that *Cirrhina afghana* does not belong to the genus *Cirrhina*.²

¹ Günther, *Trans. Linn. Soc. London*, Zoology V, p. 106, pl. xii, fig. c (1889).

² Day (*Fishes of India*, 1878, p. 547) enumerates in the genus *Cirrhina* the following species from India :—

C. cirrhosa (Bloch).

C. mrigala (H. B.).

C. latia (H. B.).

C. reba (H. B.).

C. fulungee (Sykes).

Of these five species I have seen all but the last. *C. cirrhosa*, *C. mrigala* and *C. reba* belong to the genus *Cirrhina*, as defined above. *C. fulungee*, to judge from Day's

The proper place of *Cirrhina afghana* is in the genus *Cyprinion* Heckel 1843 (type: *C. macrostomus* Heckel) which is allied to *Varicorhinus* Rüppell 1835 (type: *V. beso* Rüppell)=*Capoeta* Valenciennes 1842 (type: *C. fundulus* Val.=*C. capoeta* Güldenstadt)=*Scaphiodon* Heckel 1843 (type: *Sc. perergrinorum* Heckel=*V. damascinus* (Val.)), but differs in having seven branched rays in the anal fin (instead of five or, rarely, six), and a more or less developed scaleless furrow from the occiput to the origin of the dorsal. Dorsal with an osseous ray serrated behind and with from 9 to 16 branched rays. Scales subcircular. Barbels 2, angular. Intestinal canal very long, with many convolutions. The posterior chamber of the air-bladder long and narrow (in *C. microphthalmum*), longer than in *Crossochilus latius*.

The very characteristic genus *Cyprinion* includes some species inhabiting Syria, Mesopotamia, Southern Persia, Baluchistan, Sind and Punjab (Salt Range). These species are: *C. macrostomus* Heckel, *C. tenuiradius* Heckel and some species grouped about *C. watsoni* (Day). The species of the last group have been referred to most diverse genera: *Scaphiodon*, *Cirrhina*, *Barbus* etc. The section *C. watsoni* contains small forms with (9) 10-11, mostly 10 branched rays in the dorsal. The species belonging to this group are common in Southern Persia, Baluchistan, Sind and Salt Range, chiefly in tributaries to the Indian Ocean, but in some of the inland basins of Southern Persia and Baluchistan also, for instance, at Nushki, Quetta, Panjgur, and in the system of Hamun Lake.

Cyprinion is absent from central and northern Persia. Therefore it is quite improbable that *Cirrhina afghana* should be met with at Kashk, in the drainage system of the Murghab (Transcaspia).

I give here a preliminary list of all the species of *Cyprinion* belonging to the *watsoni* group. Although I have in my hands rather considerable materials from Persia collected by N. Zarudny in 1898-1901 and 1904, I do not regard them sufficient to warrant a definitive system of this very variable group.

1. *Cyprinion watsoni* (Day), Syn: *Scaphiodon watsoni* Day 1872, Sind.

2. *C. watsoni belensis* (Zugmayer). Syn.: *Scaphiodon watsoni* var. *belensis* Zugmayer 1912. Las Belas in Baluchistan. Sarbas R. in S. E. Persia.

3. *C. irregulare* (Day). Syn.: *Scaphiodon irregularis* Day 1872 *Scaphiodon readingi* Hora 1923.—Sind, Salt Range, Quetta, Persian Baluchistan, S. Waziristan (Indus system).

4. *C. microphthalmum* (Day). Syn.: *Scaphiodon microphthalmus* Day 1880, Quetta; *Cirrhina afghana* Günther 1889, Nushki; *Scaphiodon*

description and figure, belongs to *Cirrhina* also. *C. latia* (H. B.) belongs to the genus *Crossocheilus* Hasselt 1823 (type *C. oblongus* Hasselt). *C. latius* (H. B.) [*Cyprinus Garra*] *latius* H. B. 1822, Tista R., Ganges, *Barbus diplochilus* 1838 and *Tylognathus barbatulus* Heckel 1844, Kashmir; I have seen three specimens from Kashmir No. 5311 and six from Simla No. 8296] has the anal opening in adults far apart from the origin of the anal fin, peritoneum black, intestinal canal long, upper lip distinctly fringed the posterior chamber of the air-bladder, as shown by Hora (*Rec. Ind. Mus.* XXII, 1921, pp. 646, 647, fig. II), long and narrow.

macmahoni Regan 1906, delta of Helmand; *Scaphiodon baluchiorum* Jenkins 1910, S. Baluchistan.—S. Persia (Kirman), Seistan, Baluchistan.

C. microphthalmum subsp. *nikolskii* (Berg) 1905. Syn.: *Scaphiodon aculeatus* Day, Gwadar, Quetta; *Cirrhina afghana* var. *nikolskii* Berg 1905, Bampur R.; *Scaphiodon aculeatus* (non Val.) Zugmyer, 1913, Gwadar, S. Persia (Bampur R., Gwadar R.), probably also Baluchistan (Quetta).

5. *C. milesi* (Day) 1880. Syn.: *Barbus milesi* Day 1880, Quetta; *B. milesi* var. Day 1880, Gwadar; *Barbus bampurensis* Nikolsky 1899, Bampur R.; *Scaphiodon daukesi* Zugmayer 1912, Baluchistan; *Barbus baschakirdi* Holly 1929, Gaz R. in Biaban, S. Persia.—Southern Persia and Baluchistan in rivers emptying into the Indian Ocean. Quetta.

Full descriptions and figures will be found in my paper on the fishes of Persia, Mesopotamia and Syria, now in preparation.

It has been indicated above that in the case of "*Cirrhina afghana*" there is a probability that some labels may have been transposed. This seems to have happened also in the case of certain other species brought by the Afghan Delimitation Commission. I give here a list of all the species mentioned by Günther (1889) with notes on their synonymy and true geographical distribution.

1. *Cirrhina afghana* Günther. "Nushki, Kushk" (Günther). = *Cyprinion microphthalmum* (Day) 1880.—South Persia as far north as Seistan, Baluchistan.

2. *Discognathus lamta* (H. B.) "Helmand R., Kushk." Boulenger¹ referred these specimens (in the British Museum) to *Discognathus variabilis* (non Heckel). Formerly (Fische von Turkestan, 1905, p. 51) I believed that Boulenger was mistaken in his determination, but as Hora² referred the examples in the Indian Museum, brought by Aitchison (Afghan Delimitation Commission), to *Garra rossicus*, I do not doubt that Günther's identification was wrong.

The proper name of *Discognathus variabilis* Boulenger (non Heckel) is *Discognathichthys rossicus* (Nikolsky) 1900 (type from the Tedshen R., Transcaspia). Specimens from Eastern Persia, Kirman, with naked belly, breast and back before the dorsal were separated by me in 1905 as *Discognathus rossicus* var. *nudiventris*.³ Later on the same variety was described from Seistan by Annandale⁴ as *Discognathus phryne*; it occurs also in Quetta and Pishin Districts (Baluchistan).

All the specimens from the Murghab and Tedshen in the collections of the Zool. Mus., Academy of Sciences, have the chest and back scaled. As Hora (*loc. cit.*) refers Aitchison's specimens to *D. rossicus* = *phryne* Ann. (*i.e.*, to the form with naked chest and back, = *nudiventris* Berg) I suppose that they were collected not in "Helmand and Kushk," but in the Helmand and at Nushki.

3. *Capoeta steindachneri* (Kessler). "Nushki, Kushk." = *Varicorhinus heratensis* (Keyserling) 1861.—Rivers of Transcaspia (Germab,

¹ Boulenger, *Proc. Zool. Soc. London* II, p. 160 (1901).

² Hora, *Rec. Ind. Mus.* XXII, p. 683 (1921).

³ Berg, *Fische von Turkestan*, p. 54 (1905); *Faune de la Russie*, Poissons III, livr. 2, p. 526 (1914). The type-specimen of the species came from Shivar, north of Nikh or Neh, N. E. Kirman, basin of Hamun lake.

⁴ Annandale, *Rec. Ind. Mus.* XVII, p. 76 (1919).

Tedshen, Murghab); eastward replaced by subsp. *steindachneri* (Kessler) 1872. The genus *Varicorhinus* is absent from Baluchistan and it is quite improbable that it should be met with at Nushki.

4. *Schizothorax intermedius* McClell. "Kushk." I have never seen specimens of *Sch. intermedius* from the Murghab drainage system. I believe that Günther's specimens came from the Helmand and represent what is known as *Sch. zarudnyi* (Nikolsky) 1897=*Barbus microlepis* Keyserling 1861 (*nomen praeoccupatum*), both described from the Hamun Lake drainage.

5. *Schizothorax raulinsii* Günther. "Hari-rud near Khusan"; Bezg on the Jam R., a tributary of the Hari-rud in Khorasan,"=*Sch. pelzami* Kessler 1870.—Northern Persia. Transcaspia (Hari-rud, or Tedshen, and others).

6. *Gobio gobio* (L.). "Kushk."=*Bungia nigrescens* Keyserling 1861, Hari-rud at Herat=*G. gobio lepidolaemus* Kessler 1872, Zaravshan.—Transcaspia (Tedshen or Hari-rud, Murghab), Zaravshan, Syr-daria.

7. *Nemachilus kessleri* Günther. "Nushki."—Baluchistan. N. Zarudny brought this species (No. 11701) from Kelate-marg in the territory Neh-i-Bandan, Eastern Persia, South of Zirkuh, and not in Zirkuh as stated by Nikolsky.