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NOTES ON TYPE SPECIMENS OF TRICHIUROID FISHES IN THE BRITISH MUSEUM (NATURAL HISTORY)

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THE preliminary revision of the fishes of the family Trichiuridae by Tucker (1956) was based partly on type specimens in the British Museum (Natural History). Re-examination of some of these fishes has shown that the specimens of *Eupleurogrammus intermedius* which he claimed to be the syntypes of that species cannot be the original specimens, and also that the unique holotype of *Evoxymetopon poeyi* is still preserved in this Collection.

1. *Eupleurogrammus intermedius* (Gray, 1831)

Tucker claimed that Gray's types had not previously been properly recognised and segregated, and continued from there to assert that one jar (registered number 1860. 19.76. *sic*) containing three specimens and bearing, among others, a label with the words 'Trichiurus intermedius Chusan. E. I. Company' contained the type specimens of that species. Tucker's account continues, 'A second label, written in ink on paint, changes the identification to *Trichiurus muticus* and a third, overlying both, adds the register number and changes the source to Dr. Cantor's Colln. It is not possible to reconcile this material with any entry in Günther (1860), but there seems no doubt that these are the syntypes of *T. intermedius* Gray, both from their apparent history and their study.'

Despite this statement which is not further elaborated the evidence available in no way supports the interpretation that they are the types of *T. intermedius*. The evidence is as follows.

Labels. There are four old labels on this jar, two of which (*a* & *b*) have been partly overlain by two later added labels (*c* & *d*). These labels read as follows:

a. '*Trichiurus intermedius*/Chusan. E. I. Company' on a small paper label,

b. '*Trichiurus muticus*/Chusan. East I. Company' on a strip of white paint.

c. '[*Tri*] *chiurus muticus*/[18] 60.3.19.76.' on a paper label, overlapping the base of label *a*, and partially overlapped (so as to obscure the first three letters in *Trichiurus*) by label *d*. The century numerals were usually omitted in nineteenth century registration of zoological accessions in the Natural History Department of the British Museum.

d. '*Trichiurus muticus*/Chusan Dr. Cantor's Colln'. A paper label partially overlapping label *c*.

Registration numbers. Tucker thrice gives the registration number 1860.3. 19.76. quoting it incorrectly and differently, on two of these occasions. Reference to the register of that date shows that it was a collection of several hundred fishes presented as the India House Collection. No locality was given. The substantial part of this collection of fishes originated from Dr. Theodore Edward Cantor

(1809-1854). A second register number (viz. 1843.7.21.31.) appears engraved on the rim of the base of the jar (this was not mentioned by Tucker who presumably did not notice it). This registration also shows the specimen to have been received from the East India Company with the locality Chusan.

These labels, their juxtaposition, and the registration numbers are significant and shed some light on the history of these specimens. The painted label *b* and the engraved 1843 registration are probably contemporary and must be the earliest of the labels. It can therefore be assumed that the jar and one of the specimens date from 1843 and should bear the locality Chusan, with the East India Company as donor. This fish is specimen ' g ' of Günther (1860 : 348). The name used for this specimen was *T. muticus*. Label *a* could be either contemporary, or belong to the later accession, it but gives the specimen(s) the name *T. intermedius*. The later accessioned specimens (specimens ' a, b ' of Günther) date from 1860, and the labels *c* and *d* referring to this lot give the locality as Chusan, the source as Dr. Cantor's Collection and the scientific name as *T. muticus*. Label *c* was clearly fixed after the specimen was received in the Museum as it bears the registration number, while label *d* is probably the label which accompanied the specimen from the East India Company's museum when it was received in the British Museum, for it specifies Cantor's collection (which was sent to the India Company by Cantor), and as seen from the 1860 register the donor to the British Museum was the Company, not Cantor himself.

The thesis that two separate accession lots have been put into one jar explains the elaboration of labels. It also accounts for Tucker's inability to reconcile this material with any entry in Günther (1860). The solution is simple and the three specimens in fact represent specimens (*a, b*) and *g* listed by Günther (1860 : 348) which is confirmed by marks in the interleaved working copy of Günther's *Catalogue*. Strictly the entry in Günther suggests that there were at that date three jars involved. Possibly the aggregation of these lots took place with the incorporation in 1860, or shortly after this. It involved putting together two (or three) lots of specimens from the same locality, received at intervals of twenty years ; this was not an unusual museum practice when economy of bottles and preservative were concerned.

The standing of these specimens as syntypes of *T. intermedius* must now be examined. Gray (1831) described this species with descriptions of two other forms unnamed until then. His title is significant ' Descriptions of three Species of Trichiurus *in the British Museum* ' (italics mine). Under the description of one of the other species (*T. armatus*) he specifically states *Indian Ocean. Brit. Mus.* thus confirming that the specimens described in 1831 were already in the British Museum. As it happens the type specimens of both *T. armatus* and *T. muticus* (also described by Gray) are still preserved in the British Museum (Natural History), both were unregistered (Tucker had them registered in 1955 as a curatorial routine), and they originated from Major-General Thomas Hardwicke's collections from India. They thus formed part of the Old Collection present in the British Museum's collection before J. E. Gray initiated the (year, month, day, serial number) system of registration in 1837. The type specimen of *T. intermedius* should therefore have been a specimen present in the British Museum collection before 1831, and would therefore not have received an early accession number (probably too, like the other species described by Gray in that paper, it originated from India and Hardwicke's collection). As we have seen the specimens Tucker claimed to be syntypes of *T. intermedius* were accessioned at the British Museum in 1843 and 1860; they also came from a different source to the other specimens described by Gray.

It should also be pointed out that T. E. Cantor, the collector of Tucker's 'types' did not arrive in Chusan until July, 1840, when he accompanied the troops on the India Company's 'Opium War' Expedition (Archer, 1962). Chusan, before his visit, was unknown to naturalists. These specimens could not therefore have been collected until nine years after the species was described.

Further evidence of a critical nature is provided by the specimens themselves Gray's description clearly states that the length of the type specimen of *T. intermedius* was 15½ inches, the present specimens measure in total length 336, 310, 274 mm. (13.3, 12.2, 11 inches). The difference between the largest of these specimens (which is not shortened by damage) and Gray's 15.5 inches is too great to be due to shrinkage or error in measurement. It might be parenthetically noted here that specimen 'f' of Günther (1860) ('India. Presented by General Hardwicke.—Named *Trichiurus acutirostris*,' now registered as 1955.5.13.3.) is exactly 15½ inches long, and is certainly the type of *T. intermedius* Gray. Tucker examined this specimen and identified it as *E. muticus*.

To summarise the evidence concerning the type status of these specimens.

Evidence for

1. One of the labels gives the binomen *Trichiurus intermedius*.

2. Tucker's statement that 'study' of the specimens confirms their type status.

Evidence against

1. The accession to the British Museum collection of the specimens in 1843 and 1860 when the type had been described from the collection in 1831.

2. The description of the species (1831) before the arrival of the collector in Chusan in 1840.

3. The difference in length between the largest of the present specimens (13.3 inches) and the length of the type (15.5 inches).

4. The original label gives the binomen *T. muticus*.

5. The locality and source of the present specimens differ from those of other species described at the time by Gray.

On balance therefore it seems certain that Tucker was mistaken in claiming these specimens as the syntypes of *T. intermedius*, a mistake which was the cause of 'one of the major nomenclatorial surprises of the present paper' (Tucker, 1956). This error has already been assimilated into the literature of the trichiurid fishes, notably in the work of James (1967). Future workers on the family Trichiuridae should, however re-examine the nomenclature of the species named *Eupleurogrammus intermedius*, by Tucker in which he has been followed by James. On the evidence and synonymy presented by Tucker it would seem that *T. intermedius* Gray is a junior subjective synonym of *E. muticus* (Gray, 1831), as Günther (1860) had stated. *Eupleurogrammus glossodon* (Bleeker, 1860) appears to be the only name available for the species Tucker called *E. intermedius*. This name was used by de Beaufort (1951), and others, before Tucker's 'major nomenclatorial surprise' misled workers into regarding it as a junior synonym.

2. *Evoxymetopon poeyi* Günther, 1887.

Evoxymetopon poeyi was a species described by Günther (1887), with some doubt as to its distinctness, from the type species *E. taeniatus* Poey in Gill, 1863. It was based on a stuffed mounted specimen from Mauritius which was received by Günther while his 'Challenger' report was in the press (although it was not a specimen from the 'Challenger' Expedition). So far as one can judge from Tucker's account of this species it seems to be the only known specimen of this rare trichiuroid described under this name. It had certain interesting features in which it differed from the type species of *Evoxymetopon*, notably in the remarkable elongation of the first dorsal fin element to form a massive bony spine, three quarters the length of the head. Tucker's account of this species, (for he synomymised *E. poeyi* and *E. taeniatus*) was based entirely on published sources, and he did not examine Günther's type specimen of *E. poeyi*, claiming that it was lost, 'there is certainly no evidence that it ever become part of the permanent collections of the British Museum (Natural History). In fact, the type specimen is present in the collection of this Museum, a large, stuffed and mounted fish in a glass case over eight feet long. It was fully registered with the accession number of 1886.7.3.6, was presented by a M. de Robillard and came from Mauritius, probably Port Louis.

In view of Tucker's categorical statement that it is not in the collection of the British Museum (Natural History) it seems as well to draw its continued existence to the notice of workers on this group.

A series of measurements and general notes are given, (all measurements are between verticals and are given in millimetres). Total length 2026, standard length 1956, head length 240, snout length 92, orbit diameter 48, post orbital 103, pre-dorsal length 150, pre-pectoral length 260, length to base of pelvic scute 317, pre-anus length 951, pre-anal fin length 1785, pelvic scute length 17.5, length of longest (lower) pectoral ray 112, length of upper pectoral ray 46, depth at centre of orbit 117, at hind end of operculum 141, at upper pectoral origin 141, at anus 110, at tenth dorsal (D^{10}) ray 133, at D^{20} 122, at D^{30} 112, at D^{40} 105, at D^{50} 98, at D^{60} 86, at D^{70} 73, at D^{80} 44, at D^{90} 17, depth of caudal peduncle 7.5. Length of elongate dorsal spine D^{1} 160, (this spine has been broken in two places and repaired with metal pins, radiographic examination suggests that the ray as measured is still shortened by breakage).

Dorsal rays, 1+93, there is no evidence either externally or by X-ray examination that the first ten rays of the dorsal are differentiated as undivided spines from the remainder of the fin as described by Gill (1863). The anterior part of the anal fin has been destroyed by the taxidermist in mounting the specimen, 14 rays are clearly distinguishable, others, to make a total of 41, appear to have been damaged. This contrasts with Günther's (1887) count of X+20 for this specimen, Tucker notes that *E. taeniatus* appears to have upwards of 30 small spines anterior to the fin proper, which was said by Gill to have 19 rays, thus giving a total of 30+19. The internal skeleton, apart from parts of the cranial structure, has been completely destroyed in the taxidermy of this specimen.

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SUMMARY

The scientific name of the fish described as *Eupleurogrammus intermedius* Gray, (1831) by Tucker (1956), in which he was followed by James (1967) is changed to *E. glossodon* (Bleeker, 1860), a name which was widely used by earlier workers. This nomenclatural alteration follows from the discovery that the specimens claimed by Tucker to be the types of *E. intermedius* cannot be the type specimens of that species.

The rediscovery of the type specimen of *Evoxymetopon poeyi* Günther, 1887, which had been regarded as lost, is announced. A description of the type in the British Museum (Natural History), London, is given.

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