World distribution of the Baloon Alfonsin, Beryx mollis (Pisces: Beryciformes: Berycidae)

Errata: World distribution of the Baloon Alfonsin, *Beryx mollis* (Pisces: Beryciformes: Berycidae) [Bull. Fac. Sci., Univ. Ryukyus, 72: 119-123 (2001)]

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The following misprints in above published paper should be corrected. The title of Table 1 was missing.

Table 1. Selected counts and proportional measurements expressed as percentages of standard length of *Beryx mollis*

Source	Present study				Yoshino *et al.* (1999)
Locality	Socotra	Error Seamount	Equator Seamount	South China Sea	Southern Japan
No. of specimens	3	67	1	2	21
Dorsal fin	IV, 12-13	IV, 12-13	IV, 12	IV, 12	IV, 12-13
Anal fin	IV, 25-27	IV-V, 24-28	IV, 25	IV, 28	IV, 27-32
Pectoral fin	16	15-17	15	15-16	16-18
Pelvic fin	I, 10	I, 10-11	I, 10	I, 9-10	I, 9-10
Gill rakers	7+18-19	6-7+16-20	7+17	6+17	6-7+14-17
Lateral line scales	66-74	64-79	73	68-71	60-69
Pyloric caeca	13-17	12-20*	18	15**	15-20
Standard length (mm)	144-177	124-243	305	144-225	114-308
Body depth	38.0-41.1	34.6-41.8	39.1	38.2-44.0	39.0-43.2
Head length	35.0-35.6	32.8-38.0	35.4	31.3-35.1	31.8-39.3
Eye diameter	13.7-14.2	12.6-17.3	15.7	13.5-15.1	13.8-15.9
Interorbital width	7.1-7.9	5.1-8.5	7.9	7.6-8.2	6.8-8.4
Maxillary length	18.8-19.2	16.9-20.7	20.0	17.4-18.7	17.1-19.5
Caudal peduncle depth	10.3-11.0	8.2-11.0	10.8	9.4-10.2	6.7-10.4
Caudal peduncle length	12.5-15.1	10.9-15.2	12.8	10.9-11.5	11.1-14.3
Pectoral fin length	24.3-28.8	23.3-30.0	28.2	26.0**	25.1-31.8
Pelvic fin length	22.2-24.3	19.4-27.8	25.9	24.0-25.1	24.1-33.2

*based on 38 specimens
**based on one specimen

World distribution of the Baloon Alfonsin, *Beryx mollis* (Pisces: Beryciformes: Berycidae)

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Abstract

Based on specimens collected from outside of the Japanese waters by Russian research vessels, we confirmed the distribution of the baloon alfonsin, *Beryx mollis* Abe, from the Indian Ocean and the South China Sea. Result of comparison with Japanese specimens is discussed with notes on some morphological characters showing geographical variation.

Key words: Berycidae; *Beryx mollis*; distribution; Indian Ocean; South China Sea

Introduction

Beryx mollis Abe, 1959 closely resembles *B. splendens* Lowe, 1834 but differs in having the following characters: fewer number of soft dorsal fin rays (12-13 vs. 13-14); fewer pyloric caeca (15-20 vs. 27-36); oval-shaped posterior nostril (vs. slit-like) and so on (Yoshino, 1989; Hayashi, 1993; Yoshino *et al.*, 1999). Validity of *B. mollis* was confirmed by examining the type specimens (Yoshino, 1989; Yoshino *et al.*, 1999). The confirmed distribution of *B. mollis* has been restricted only to southern Japan from Sagami Bay to the Ryukyu Islands (Yoshino *et al.*, 1999). However, Kotlyar (1993, 1996) reported occurences of the species collected by Russian research vessels from outside Japanese waters. His identification was solely based on Yoshino's (1989) brief diagnosis without direct comparison to Japanese specimens.

During a research on the distribution of *B. mollis* outside the Japanese waters, we confirmed several collections including many specimens of this species from the Indian Ocean

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and the South China Sea as reported below. Geographical variation and diagnostic characters of the species are also discussed.

Materials and Methods

All examined specimens except for Japanese specimens listed in Yoshino *et al.* (1999) are deposited in P. P. Shirshov Institute of Oceanology, Russian Academy of Sciences, as follows: 3 specimens, 144-177 mm SL, Socotra (12° 14' N, 53° 06' E, 420-395 m, 16 Jan. 1989), R/V *Vityaz* St. 2830; 67 specimens, 124-243 mm SL, Error Seamount (10° 19' N, 56° 08' E, 420-395 m, 14 Jan. 1989; 10° 18' N, 56° 07' E, 406-415 m, 30 Oct. 1988; 10° 21' N, 56° 05' E, 415 m, 9 May 1983), R/V *Vityaz* Sts. 2825 and 2573, and R/V *Rift* St., respectively; 1 specimen, 305 mm SL, Equator Seamount (0° 26' N, 56° 04' E, 400 m, 2-3 Oct. 1988), R/V *Vityaz* St. 2585; 2 specimens, 144 and 225 mm SL, South China Sea (9° 51' N, 107° 33' E, 510-580 m, 12 June 1983), R/V *Milgradovo* St.

The counting and measuring methods follow Hubbs and Lagler (1947) and Yoshino *et al.* (1999). Proportional measurements are expressed as percentages of standard length (SL).

Results and Discussion

The collected localities and the result of counts and measurements are shown in Fig.1 and Table 1, respectively. These specimens shared the morphological characters having fewer dorsal fin rays (IV, 12-13), fewer pyloric caeca (12-20) and oval-shaped posterior nostril.

Comparison between the present specimens and those given by Yoshino *et al.* (1999) including the holotype revealed that they agreed well with each other especially in having above-mentioned characters. However, some characters such as numbers of soft anal fin rays and lower gill rakers showed differences between the Indian Ocean (Error Seamount) and Japanese specimens (means 26.3 vs. 29.1, 18.1 vs. 15.9, respectively). In some morphometric characters (body depth and pelvic fin length), such slight differences were also found between them. These differences, as a whole, seem not to merit to separate species but to be geographical ones within a same species. Consequently, the key characters, number of soft dorsal fin rays, number of pyloric caeca and shape of posterior nostril, used by Yoshino (1989), Hayashi (1993) and Yoshino *et al.* (1999) are confirmed to be valid to identify *B. mollis* collected outside the Japanese waters.

Despite the fact that the other two species, *Beryx splendens* and *B. decadactylus* Cuvier, 1829, are well known to distribute in the Indian Ocean (Shimizu, 1983; Heemstra, 1986), there has been no verified record of *B. mollis* from the ocean (Yoshino *et al.*, 1999). The present specimens from Socotra, Error Seamount, Equator Seamount and the South China Sea indicate a wider distribution of the species in the Indian and the western Pacific Oceans. A complete synonymy of *B. mollis* is given below.

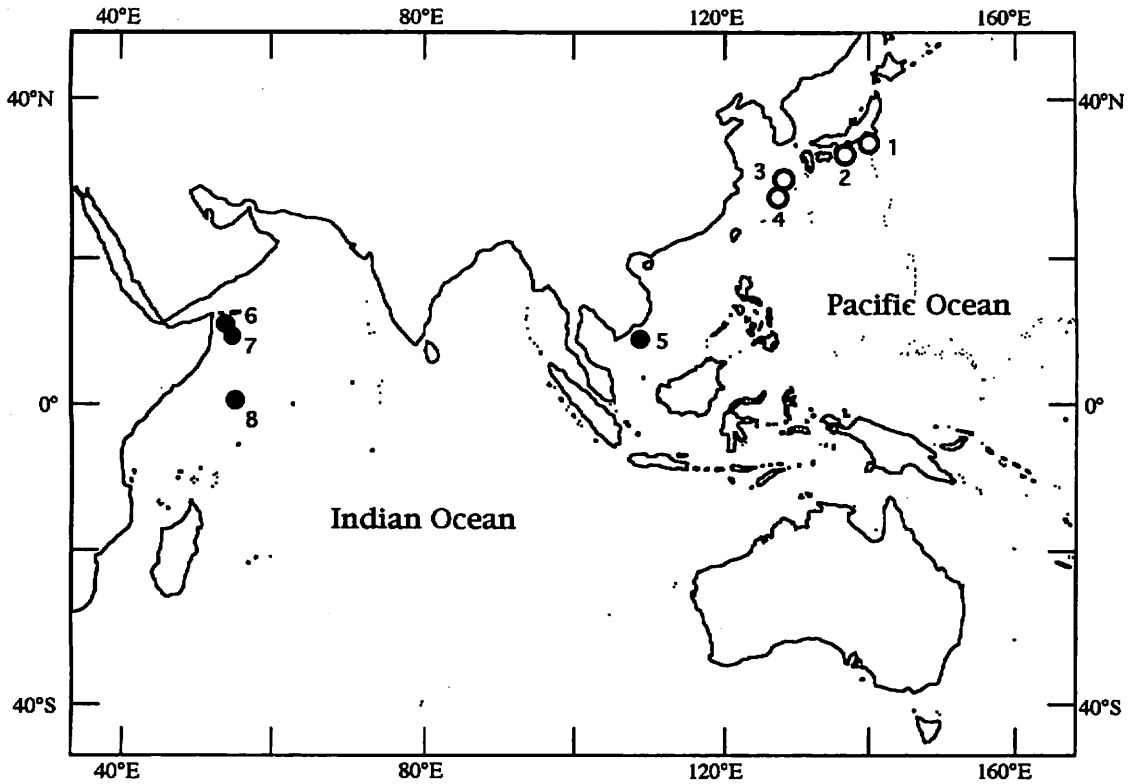

Fig. 1. Distribution of *Beryx mollis*. Solid and open circles indicating localities outside and inside the Japanese waters, respectively. 1, Sagami Bay; 2, Kumano-nada; 3, Okinawa Trough; 4, off Okinawa Island; 5, off Vietnam, South China Sea; 6, Socotra; 7, Error Seamount; 8, Equator Seamount.

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*based on 38 specimens
**based on one specimen

Beryx mollis Abe
(New English name: Baloon alfonsin)
(Japanese name: Fusen-kinme)

Beryx mollis Abe, 1959: 157, pls. 4-6 (figs. 1-7) (original description, type locality: Sagami Bay, Japan); Masuzawa *et al.*, 1975: 28, photos. 1-C and 2-C (fisheries, Sagami Bay to Izu-Oshima I., Japan); Busakhin, 1982: (compiled from original description); Yoshino, 1989: 9 (validity, diagnosis); Hayashi, 1993: 439 (illustrated key, compiled from Yoshino, 1989 and Yoshino's ms.); Kotlyar, 1993: 187, figs. 4 and 5-b (western Indian Ocean); Kotlyar, 1996: 99, figs. 36-b and 38 (western Indian Ocean and South China Sea); Eschmeyer *et al.*, 1998: 1112 (type catalog); Yoshino *et al.*, 1999: 77-86, figs.1-5 (comparison with *B. splendidus* based on Japanese specimens including holotype, comments on identification of previous authors).

Beryx splendens (not of Lowe): Yamakawa, 1985: 426 with color photo and 649 (Okinawa Trough); Okiyama, 1988: 355-356 with fig. (brief description of a larva).

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