

CYNOGLOSSID FISHES (PLEURONECTIFORMES: CYNOGLOSSIDAE) OF TAIWAN

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Shih-Chieh Shen (1983) Cynoglossid fishes (Pleuronectiformes: Cynoglossidae) of Taiwan. *Bull. Inst. Zool., Academia Sinica* 22(1): 105-118. In the present revision of the cynoglossid fishes from the waters surrounding Taiwan, eighteen species belonging to three genera have been recognized. They are *Symphurus orientalis*, *S. strictus*, *Paraplagusia bilineata*, *P. blochi*, *P. japonica*, *P. guttata*, *Cynoglossus bilineatus*, *C. robustus*, *C. arel*, *C. lida*, *C. suyeni*, *C. kopsi*, *C. interruptus*, *C. puncticeps*, *C. itinus*, *C. joyneri*, *C. gracilis* and *C. abbreviatus*. Among them, four species, *Symphurus strictus*, *Cynoglossus suyeni*, *C. interruptus*, and *C. itinus* are new records to Taiwan. A key to genera and species, diagnosis, figures and remarks (if any) of each species are presented.

The world wide distribution of cynoglossid fishes have been reviewed by Menon (1977) and a total of forty eight species of the genus *Cynoglossus* have been recognized. Two other genera, *Symphurus* and *Paraplagusia* were not included in his monograph. Chen and Weng (1965) reviewed eighteen species of the cynoglossid fishes of Taiwan belonging to four genera.

In present revision, we found that eight species reported by Chen and Weng (1965) were synonyms with others and two species without specimen. *Paraplagusia formosana* was named by Oshima (1927) based on single specimen collected from Taipei Fish Market, unfortunately, the specimen was lost. Since then, no specimen has ever been collected. Menon (1977) did not include this species in his monograph and since it is *nomen nudum*, we discard this species from the present study.

From this study, we recognized eighteen species of cynoglossid fishes belonging to three genera, among them four are new records.

MATERIALS AND METHODS

The materials used for the study were

collected from the waters surrounding Taiwan and its adjacent Islands. All specimens are deposited in the Museum of Department of Zoology, National Taiwan University (NTUM).

Counts and measurements followed those used by Menon (1977) except angle of snout was measured according to Fig. 1 shown below. The descriptions of body depth, head size and snout length are all in proportion to standard length, and the extent of sharpness of snout. See Tables 1 and 2.

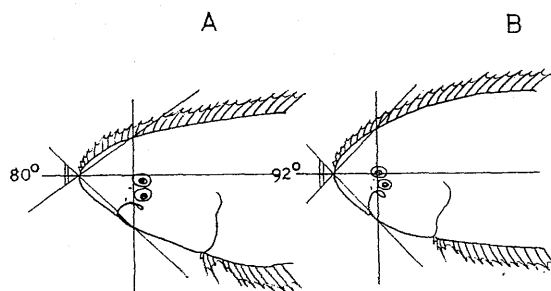


Fig. 1. Diagrammatic figures illustrating the length of snout to height represented by angles for two species of *Cynoglossus*, A. *C. arel*, B. *C. puncticeps*.

TABLE 1
Meristic counts of cynoglossid fishes

Species	Dorsal rays	Anal rays	Caudal rays	Vertebrae	Lateral line scales	Scales between upper and middle lateral lines
1. <i>Symphurus orientalis</i>	93-98	83-86	12-14	51-52	—	—
2. <i>S. strictus</i>	105	90	14	57	—	—
3. <i>Paraplagusia bilineata</i>	114	89	8	52	125	19
4. <i>P. blochi</i>	100	76-77	8	48	92-112	14-16
5. <i>P. japonica</i>	107-108	84-85	8	52	108-115	15-19
6. <i>P. guttata</i>	110	84	8	51	112	17
7. <i>Cynoglossus bilineatus</i>	109-119	88-97	12	51-53	97-121	15-18
8. <i>C. robustus</i>	123-126	87-92	10	55-57	65-74	11-12
9. <i>C. arel</i>	113-123	85-91	10	54-56	62-69	7-9
10. <i>C. lida</i>	104-109	80-82	10	50-52	102-114	13-14
11. <i>C. suyeni</i>	110-119	105-109	10	58-59	132-134	19-22
12. <i>C. kopsi</i>	104-112	83-88	10	53-56	65-85	7-12
13. <i>C. interruptus</i>	105-117	85-89	10	52-53	71-76	11-12
14. <i>C. puncticeps</i>	94-99	71-75	10	46	80-99	16-19
15. <i>C. joyneri</i>	107	85	10	50	78	12
16. <i>C. itinus</i>	99-108	83-86	8	52-53	82-87	13-14
17. <i>C. gracilis</i>	126-127	104-105	8	62	117-133	16-17
18. <i>C. abbreviatus</i>	135	106	8	57	135	20

TABLE 2
Some morphometric data of cynoglossid fishes

Species	Depth in standard length	Head in standard length	Snout in head length	Angle of snout
1. <i>Symphurus orientalis</i>	3.93-4.03	5.24-5.32	4.68-4.83	103°-110°
2. <i>S. strictus</i>	3.58	6.26	3.85	122°
3. <i>Paraplagusia bilineata</i>	3.89	4.32	2.36	82°
4. <i>P. blochi</i>	3.21-3.81	2.89-3.91	2.24-3.26	78°-81°
5. <i>P. japonica</i>	3.52-3.75	4.10-4.60	2.27-2.33	82°-85°
6. <i>P. guttata</i>	3.51-3.66	4.06-4.08	2.31-2.32	80°
7. <i>Cynoglossus bilineatus</i>	4.16-4.22	4.47-5.48	2.57-2.60	89°-93°
8. <i>C. robustus</i>	4.29-6.37	4.90-5.56	2.18-3.37	77°-82°
9. <i>C. arel</i>	4.25-4.61	4.34-4.44	2.32-2.46	72°-77°
10. <i>C. lida</i>	3.29-4.03	4.54-4.56	2.14-2.32	75°-82°
11. <i>C. suyeni</i>	4.33-4.56	4.92-5.51	2.13-2.39	67°-68°
12. <i>C. kopsi</i>	3.51-3.69	4.73-5.00	2.98-3.02	88°-100°
13. <i>C. interruptus</i>	3.28-3.51	5.35-5.52	3.35-3.88	98°-100°
14. <i>C. puncticeps</i>	3.17-3.53	4.71-5.12	2.75-3.05	94°-96°
15. <i>C. joyneri</i>	4.20	4.88	2.59	92°
16. <i>C. itinus</i>	3.41-3.56	5.22-5.45	2.86-3.00	{ 79°-80° (Adult) 99°-101° (Young)
17. <i>C. gracilis</i>	4.15-4.63	5.48-5.55	2.82-2.86	
18. <i>C. abbreviatus</i>	3.89	4.88	2.60	78°

RESULTS

Systematic accounts

Key to Genera and Species of the
Cynoglossidae

1. SYMPHURINAE: Lateral line absent; scales ctenoid on both sides (*Symphurus*)...2
CYNOGLOSSINAE: Lateral line present; two to three on ocular side.....3
2. Dorsal rays 93-98; anal rays 81-86; vertebrae 51-52.....*S. orientalis*
Dorsal rays 105; anal rays 90; vertebrae 57.....*S. strictus*
3. Lips with fringes; caudal rays 8 (*Paraplagusia*).....4
Lips without fringes; caudal rays 8-12 (*Cynoglossus*).....7
4. Two lateral lines on ocular side.....5
Three lateral lines on ocular side.....6
5. Hook of upper jaw reaching beyond posterior rim of lower eye.....*P. bilineata*
Hook of upper jaw not reaching to posterior rim of lower eye.....*P. blochi*
6. Scales cycloid on blind side....*P. japonica*
Scales ctenoid on both sides, but weakly ctenoid on blind side.....*P. guttata*
7. Caudal rays 12; two lateral lines on each side.....*C. bilineatus*
Caudal rays 8-10; no lateral line on blind side.....8
8. Caudal rays 10; two to three lateral lines on ocular side; posterior nostril of ocular side on interorbital space, anterior nostril near upper lip, tubular.....9
Caudal rays 8; three lateral lines on ocular side; one to two nostril(s) on ocular side.....16
9. Scales cycloid on blind side; two lateral lines on ocular side.....10
Scales ctenoid on blind side; two to three lateral lines on ocular side.....11
10. 11-12 scales between upper and middle lateral lines.....*C. robustus*
7-9 scales between upper and middle lateral lines.....*C. arel*
11. Mouth corner near to posterior rim of operculum than to the tip of snout.....12
Mouth corner near to the tip of snout than to posterior rim of operculum.....13
12. Two lateral lines on ocular side; eyes non-contiguous.....*C. lida*
Three lateral lines on ocular side; eyes contiguous.....*C. suyeni*
13. Eyes contiguous.....14
Eyes non-contiguous.....15
14. Ctenii area on both sides of body nearly equal; scales larger, 7-12 ($M=9$) between upper and middle lateral lines; dorsolateral line not reaching to the caudal....*C. kopsi*
Ctenii area on both sides not equal; scales smaller, 11-12 ($M=11$) between upper and middle lateral lines; dorsolateral line undulating, interrupted at middle of body...*C. interruptus*
15. Two lateral lines on ocular side.....*C. puncticeps*
Three lateral lines on ocular side.....*C. joyneri*
16. One nostril on ocular side.....*C. itinus*
Two nostrils on ocular side.....17
17. Body depth 4.15-4.63 in standard length; head 5.48-5.55; snout 2.82-2.86; angle of snout 87° - 88° ; mouth corner nearer to posterior rim of operculum.....*C. gracilis*
Body depth 3.89 in standard length; head 4.88; snout 2.6-2.79; angle of snout 78° ; mouth corner nearer to snout tip.....*C. abbreviatus*

1. *Symphurus orientalis* (Bleeker)

Fig. 2

Aphoristia orientalis Bleeker, 1879: 31.*Symphurus orientalis*, Jordan and Snyder, 1901: 122;
Chen and Weng, 1965: 102.**Materials:** 2 specimens, 78.6-92.6 mm. SL., April 2, 1979, Ta-Chi; 1 specimen, 83.0 mm. SL., Kao-hsiung.**Diagnosis:** Mouth corner near to tip of snout. Eyes very small, separated by a narrow ridge. Scales small, ctenoid on both sides. Lateral line absent.

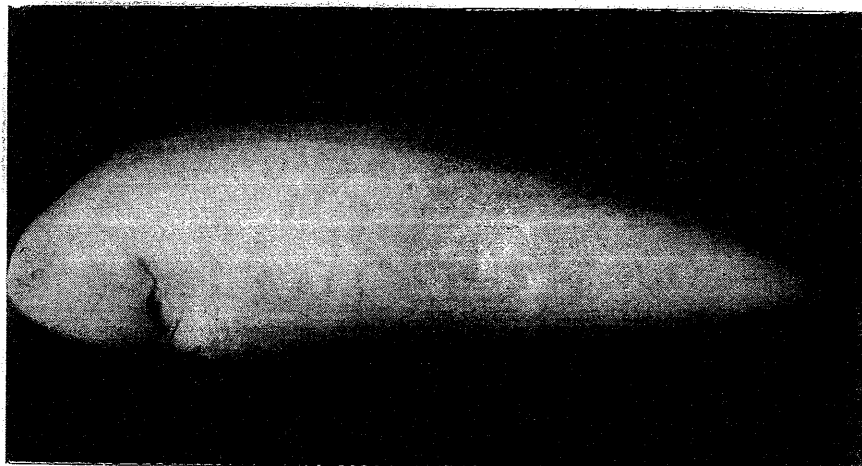


Fig. 2. *Symphurus orientalis*, 83.0 mm SL, NTUM05447.



Fig. 3. *Symphurus strictus*, 125.2 mm SL, NTUM05205.

2. *Symphurus strictus* Gilbert

Fig. 3

Symphurus strictus Gilbert, 1903: 691; Ochiai, 1963: 104.

Materials: 1 specimen, 125.2 mm. SL., Feb. 2, 1979, Ta-Chi.

Diagnosis: Mouth corner near to tip of snout. Eyes very small, separated by a narrow ridge. Scales small, ctenoid on both sides. Lateral line absent.

Remarks: The species is closely related to *Symphurus orientalis*, but differs from it in having more dorsal and anal fin rays, more vertebrae,

much greater body depth and smaller head.

3. *Paraplagusia bilineata* Bloch

Fig. 4

Pleuronectes bilineata Bloch, 1787: 29.

Paraplagusia bilineata, Jordan and Evermann, 1903: 366; Chen and Weng, 1965: 84.

Materials: 1 specimen, 146.0 mm. SL., Dec. 26, 1969, Ta-Chi.

Diagnosis: Mouth corner nearer to gill-opening; hook of upper jaw beyond posterior rim of lower eye; lips fringed on ocular side; interorbital space scaled. Scales ctenoid on both sides. Two lateral lines on ocular side.



Fig. 4. *Paraplagusia bilineata*, 146.0 mm SL, NTUM05109.

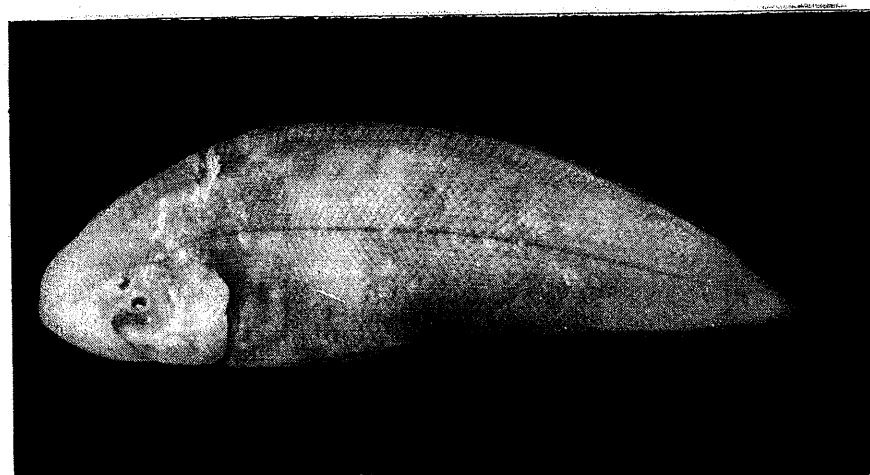


Fig. 5. *Paraplagusia blochi*, 187.0 mm SL, NTUM05449.

4. *Paraplagusia blochi* (Bleeker)

Fig. 5

Plagusia blochi Bleeker, 1851: 411.

Paraplagusia blochi, Weber and de Beaufort, 1929: 184; Chen and Weng, 1965: 85.

Materials: 1 specimen, 205.0 mm. SL., Dec. 22, 1979, Chia-Yi; 2 specimens, 173.0–187.0 mm. SL., Feb., 1969, Tungkang.

Diagnosis: Mouth corner nearer to the posterior rim of operculum; hook of upper jaw reaching to below lower eye; lips fringed on ocular side; interorbital space scaled. Scales ctenoid on both sides. Two lateral lines on ocular side.

5. *Paraplagusia japonica* (Temminck and Schlegel)

Fig. 6

Plagusia japonica Temminck and Schlegel, 1842: 187.
Paraplagusia japonica, Chen and Weng, 1965: 87.

Materials: 2 specimen, 158.0 mm. and 191.0 mm. SL., Nov. 8, 1967 and Jan. 23, 1971, respectively, Ta-Chi; 2 specimens 207.0 mm. and 237.0 mm. SL., Jan., 1970 and April 2, 1979, respectively, Keelung.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper jaw reaching to below lower eye; lips fringed on ocular side; interorbital space scaled; scales



Fig. 6. *Paraplagusia japonica*, 207.0 mm SL, NTUM05500.

ctenoid on ocular side and cycloid on blind side. Three lateral lines on ocular side.

6. *Paraplagusia guttata* (Macleay)

Fig. 7

Plagusia guttata Macleay, 1881: 123-138.

Paraplagusia guttata, Weber and de Beaufort, 1929: 185; Chen and Weng, 1965: 88.

Materials: 1 specimen, 155.0 mm. SL., April 30, 1978, Ta-Chi.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper jaw extending beyond posterior rim of lower eye; lips fringed on ocular side; interorbital space scaled. Scales ctenoid on both sides. Three lateral lines on ocular side.

7. *Cynoglossus bilineatus* (Lacépède)

Fig. 8

Achirus bilineatus Lacépède, 1802: 6.

Cynoglossus bilineatus, Menon, 1977: 36-38; Chen and Weng, 1965: 89.

Materials: 1 specimen, 236.0 mm. SL., Oct. 2, 1978, Kao-hsiung; 1 specimen, 139.0 mm. SL., July 18, 1980, Tainan (An-Ping); 1 specimen, 177.0 mm. SL., Dec. 22, 1987, Chia-Yi; 1 specimen, 143.0 mm. SL., Nov. 12, 1978, Ta-Chi.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper jaw reaching to below or before anterior rim of

lower eye; lips not fringed; interorbital space scaled. Scales ctenoid on ocular side and cycloid on blind side. Two lateral lines on ocular side.

Remarks: No specimen of this species was used by Chen and Weng. Oshima collected two specimens from Tainan Fish Market, three from Taipei Fish Market and named all of them as *Arelia quadrilineata* (Bleeker). Jordan and Evermann reported this species from Taiwan and named it *Cynoglossus diplasios*. Both species are now considered as the synonyms of *Cynoglossus bilineatus*.

8. *Cynoglossus robustus* Günther

Fig. 9

Cynoglossus robustus Günther, 1873: 243; Chen and Weng, 1965: 96.

Materials: 10 specimens, 230.0-290.0 mm. SL., July, 1955, Keelung.

Diagnosis: Mouth corner nearer to the posterior rim of operculum; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales ctenoid on ocular side and cycloid on blind side. Two lateral lines on ocular side.

Remarks: The species is closely allied to *Cynoglossus arel* but differs in having a more elongated body, shorter snout, smaller scales and less rows of scales between lateral lines.



Fig. 7. *Paraplagusia guttata*, 155.0 mm SL, NTUM05209.



Fig. 8. *Cynoglossus bilineatus*, 139.0 mm SL, NTUM05111.



Fig. 9. *Cynoglossus robustus*, 290.0 mm SL, NTUM01612.

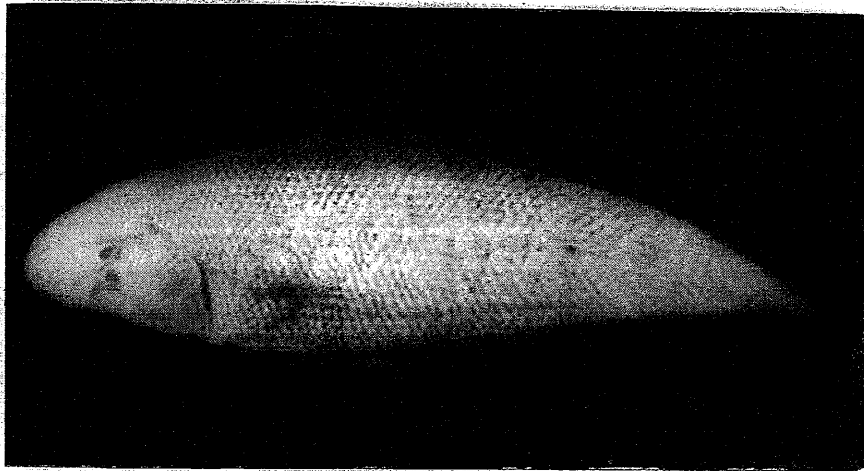


Fig. 10. *Cynoglossus arel*, 200.0 mm SL, NTUM05118.

9. *Cynoglossus arel* (Schneider)

Fig. 10

Pleuronectes arel Schneider, 1801: 159.

Cynoglossus arel, Menon, 1977: 60-61.

Cynoglossus macrolepidotus, Chen and Weng, 1965: 95.

Materials: 2 specimens, 185-200 mm. SL., Dec. 3, 1978, Kaohsiung; 1 specimen, 198.0 mm. SL., Jan. 14, 1971, Ta-Chi; 1 specimen, 110.0 mm. SL., Tainan (An-Ping); 1 specimen, 225.0 mm. SL., April 1, 1962, Keelung; 200-220 mm. SL., Nov. 14, 1972, Tungkang.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper jaw reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales ctenoid on ocular side and cycloid on blind side. Two lateral lines on ocular side.

Remarks: *C. macrolepidotus* used by Chen and Weng is now a synonym of *C. arel*.

10. *Cynoglossus lida* (Bleeker)

Fig. 11

Plagusia lida Bleeker, 1851: 413.

Cynoglossus lida, Menon, 1977: 81-82; Chen and Weng, 1965: 94.

Materials: 3 specimens, 135.0-154.0 mm. SL., Tungkang; 2 specimens, 97.0 mm. and

123.0 mm. SL., Jan. 1, 1979, Kaohsiung (Kou-Zai-Liaw); 4 specimens, 122.0-147.0 mm. SL., Dec. 1, 1978, Kaohsiung.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper jaw below eye; lips not fringed; interorbital space scaled. Scales ctenoid on both sides. Two lateral lines on ocular side.

11. *Cynoglossus suyeni* Fowler

Fig. 12

Cynoglossus suyeni Fowler, 1934: 347.

Materials: 2 specimens, 175 mm. SL. and 199.0 mm. SL., Feb. 25, 1972 and Jan. 3, 1971, respectively, Ta-Chi; 1 specimen, 200 mm. SL., Oct. 26, 1978, Tungkang.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper lip hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales ctenoid on both sides. Three lateral lines on ocular side.

Remarks: Menon noted that *Cynoglossus suyeni* is restricted to the deeper waters off Mindanao Island southward through the Celebes Sea to the Timor Sea. The present report extends the distribution of *C. suyeni* to further north in the North-Eastern Taiwan where the specimens have subsequently been collected.



Fig. 11. *Cynoglossus lida*, 123.0 mm SL, NTUM05188.



Fig. 12. *Cynoglossus suyeni*, 200.0 mm SL, NTUM05117.

12. *Cynoglossus kopsi* (Bleeker)

Fig. 13

Plagusia kopsi Bleeker, 1851: 494.

Cynoglossus kopsi, Menon, 1977: 42.

Cynoglossus brachycephalus, Chen and Weng, 1965: 93.

Cynoglossus brevirostris [not Day], Chen and Weng, 1965: 92.

Cynoglossus interruptus [not Günther], Chen and Weng, 1965: 90.

Materials: 43 specimens, 58.0 mm.–155.0 mm. SL., collected from Ta-Chi, Penghu, Tainan, Kaohsiung and Tungkang, during 1968 and 1979.

Diagnosis: Mouth corner nearer to snout

tip; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space not scaled. Scales ctenoid on ocular side and ctenii area nearly equal on both sides. Two to three lateral lines on ocular side. Color of ocular side in preserved condition brown with irregular darker blotches.

Remarks: *Cynoglossus kopsi* is closely related to *C. interruptus* in many ways, but it differs from the latter in having larger scales, lesser number of scales between upper and middle lateral lines, narrower body depth, smaller head, longer snout, and nearly equal ctenii areas on scales on both sides of body.

Generally, *C. kopsi* has two lateral lines on

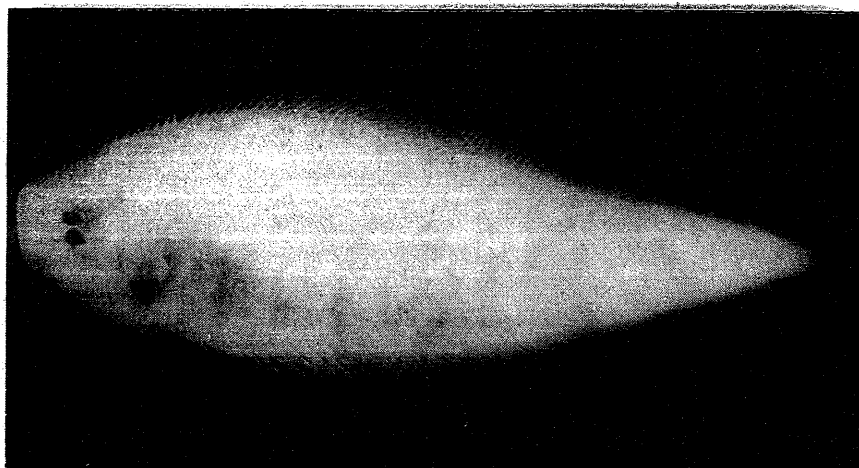


Fig. 13. *Cynoglossus kopsi*, 110.0 mm SL, NTUM05214.

ocular side, dorsolateral line interrupted, not reaching to the tip of caudal, ventrolateral line present in some specimens. *C. interruptus* and *C. brevirostris* described by Chen and Weng are not those of Günther and Day. The two species used by Chen and Weng are now designated as synonyms of *C. kopsi* and *C. brevirostris* Gray is now become synonym of the Indian species *C. semifasciatus* Day.

13. *Cynoglossus interruptus* Günther

Fig. 14

Cynoglossus interruptus Günther, 1880: 70.

Materials: 2 specimens, 133.0–139.0 mm.

SL., June 28, 1980, Kaohsiung.

Diagnosis: Mouth corner nearer to tip of snout; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space not scaled. Scales ctenoid on both sides, the ctenii areas of scales on both sides of body not equal. Generally, two lateral lines on ocular side, dorsolateral line undulating, interrupted at the middle of body, ventrolateral line present in some specimens.

Remarks: *Cynoglossus interruptus* of Chen and Weng is not the one originally described by Günther, but *C. kopsi*. The differences between the two species are noted in the remarks of *C. kopsi*.

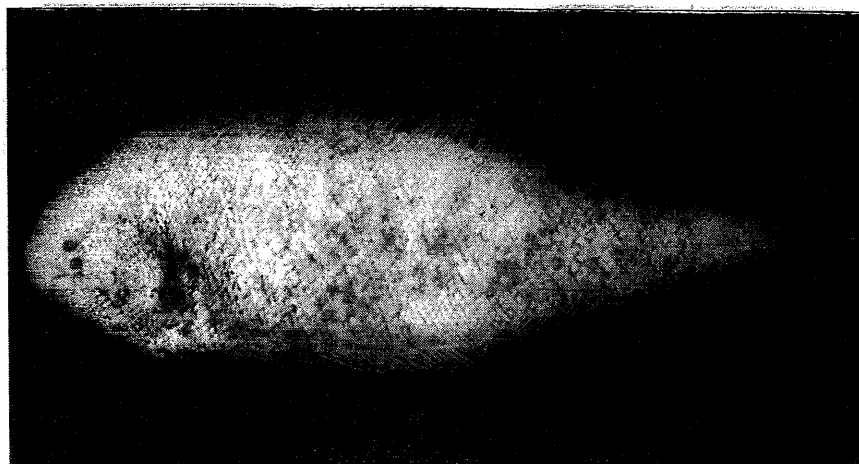


Fig. 14. *Cynoglossus interruptus*, 139.0 mm SL, NTUM05597.

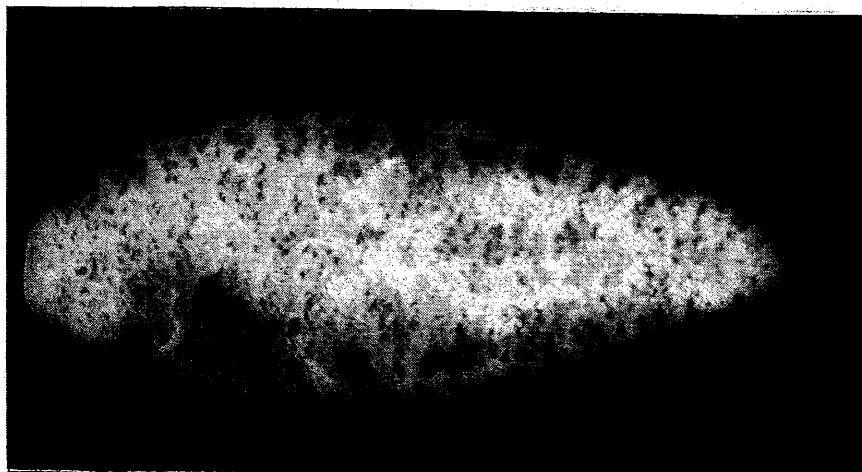


Fig. 15. *Cynoglossus puncticeps*, 108.0 mm SL, NTUM05455.

14. *Cynoglossus puncticeps* (Richardson)

Fig. 15

Plagusia puncticeps Richardson, 1846: 280.

Cynoglossus puncticeps, Chen and Weng, 1965: 91.

Materials: 1 specimen, 105.0 mm. SL., Oct. 2, 1968, Tainan (An-Ping); 1 specimen, 85.0 mm. SL., Feb., 1968, Lu-Kang; 1 specimen, 108.0 mm. SL., Kaohsiung (Chungzou).

Diagnosis: Mouth corner nearer to tip of snout; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales small, ctenoid on both sides. Two lateral lines on ocular side. Color of the ocular side in preserved condition brown with dark blotches, darkened at the

margins of the body.

15. *Cynoglossus itinus* (Snyder)

Fig. 16

Trulla itina Snyder, 1909: 609; Jordan, Tanaka and Snyder, 1913: 337.

Cynoglossus itinus, Menon, 1977: 48.

Materials: 3 specimens, 95.0 mm., 105 mm. and 136.0 mm. SL., Apr. 8, 1978, Dec. 19, 1979 and Jan. 14, 1971, respectively, Ta-Chi; 4 specimens, 98.0 mm.-130.0 mm. SL., 2 specimens, 225.0-242.0 mm. SL., and 4 specimens, 90.0-102.0 mm. SL., Nov. 2, 1977, Apr. 1, 1962 and Oct. 23, 1978, respectively, Kaohsiung.

Diagnosis: Mouth corner nearer to tip of

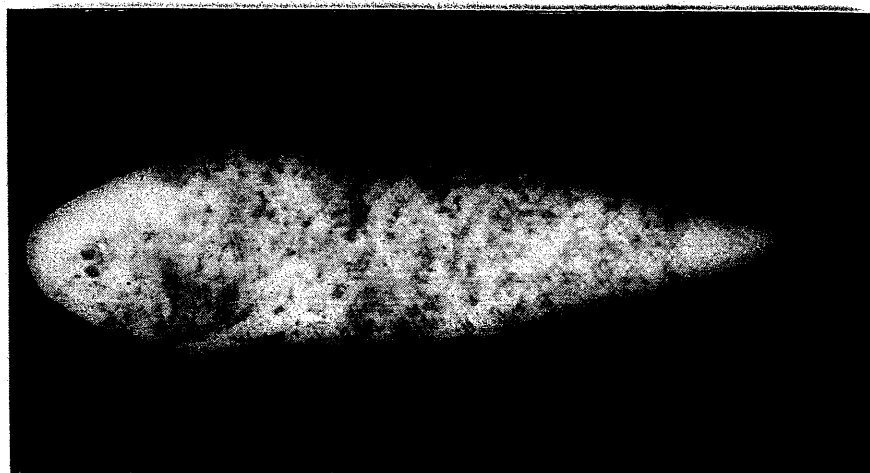


Fig. 16. *Cynoglossus itinus*, 95.0 mm SL, NTUM05223.



Fig. 17. *Cynoglossus joyneri*, 134.0 mm SL, NTUM05207.

snout; hook of upper jaw reaching beyond posterior rim of lower eye in large specimens, not reaching to anterior rim in small specimens; lips not fringed; interorbital space scaled. Scales ctenoid on ocular side, weakly ctenoid on blind side, but cycloid on head of both sides. Three lateral lines on ocular side. Color of ocular side in preserved condition light brown with dark blotches in young specimens, with generally brown in adult specimens.

Remarks: It is astonishing to note that *Cynoglossus itinus* has only one nostril on ocular side, the posterior nostril which generally presented in other species of the genus is missing in this species.

16. *Cynoglossus joyneri* Günther

Fig. 17

Cynoglossus joyneri Günther, 1878: 496.

Areliscus joyneri, Chen and Weng, 1965: 100.

Areliscus lighti, Chen and Weng, 1965: 101.

Materials: 1 specimen, 134.0 mm. SL., Feb., 1968, Pu-Tai.

Diagnosis: Mouth corner nearer to tip of snout; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales ctenoid on ocular side, scales on blind side are cycloid on head and weakly ctenoid on body. Three lateral lines on ocular side.

Remarks: *Areliscus joyneri* and *A. lighti* of Chen and Weng are designated the synonyms

of *Cynoglossus joyneri*.

17. *Cynoglossus gracilis* Günther

Fig. 18

Cynoglossus gracilis Günther, 1873: 244.

Areliscus gracilis, Chen and Weng, 1965: 99.

Areliscus trigrammus, Chen and Weng, 1965: 98.

Materials: 1 specimen, 126.0 mm. SL., Sep. 9, 1978, Su-Ao; 1 specimen, 127.0 mm. SL., Keelung.

Diagnosis: Mouth corner nearer to posterior rim of operculum; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales moderate in size. ctenoid on both sides. Three lateral lines on ocular side.

Remarks: The species is closely related to *Cynoglossus abbreviatus* but differs from *C. abbreviatus* by larger scales, much narrower body depth, and smaller head. We have examined the specimens of *Areliscus trigrammus* used by Chen and Weng, which is a misidentification of the present species. On the other hand, *A. trigrammus* is recognized as the synonym of *Cynoglossus abbreviatus*.

18. *Cynoglossus abbreviatus* (Gray)

Fig. 19

Plagusia abbreviata Gray, 1835: 94.

Cynoglossus abbreviatus, Günther, 1862: 494.

Materials: 1 specimen, 243.0 mm. SL., 1959-

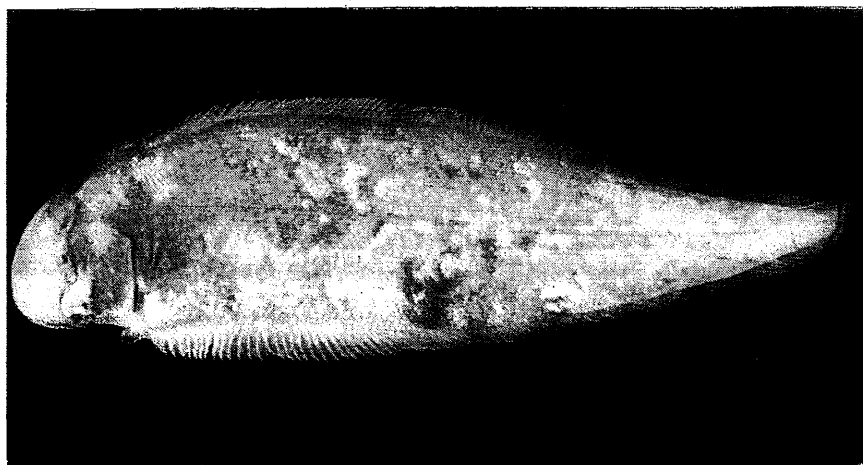


Fig. 18. *Cynoglossus gracilis*, 126.0 mm SL, NTUM05113.



Fig. 19. *Cynoglossus abbreviatus*, 243.0 mm SL, NTUM02072.

1960, Quemoy.

Diagnosis: Mouth corner slightly nearer to tip of snout; hook of upper jaw hardly reaching to anterior rim of lower eye; lips not fringed; interorbital space scaled. Scales ctenoid on both sides. Three lateral lines on ocular side.

Remarks: *C. abbreviatus* differs from *C. gracilis* in having greater body depth, larger head, and moderately pointed snout and mouth corner slightly nearer to tip of snout (mouth corner of *C. gracilis* is nearer to the posterior rim of operculum).

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臺灣近海產之左鰾科魚類

沈 世 傑

臺灣近海產左鰾科魚類經研究鑑定後共有 18 種分屬於 3 屬。此 18 種為東方無線鰨 (*Symphurus orientalis*)，多鰭無線鰨 (*S. strictus*)，雙線纓唇牛舌魚 (*Paraplagusia bilineata*)，一色纓唇牛舌魚 (*P. blochi*)，日本纓唇牛舌魚 (*P. japonica*)，固塔纓唇牛舌魚 (*P. guttata*)，雙線鞋底魚 (*Cynoglossus bilineatus*)，短壯鞋底魚 (*C. robustus*)，亞利鞋底魚 (*C. arel*)，利達鞋底魚 (*C. lida*)，書顏鞋底魚 (*C. suyeni*)，格氏鞋底魚 (*C. kopsi*)，斷線鞋底魚 (*C. interruptus*)，黑斑鞋底魚 (*C. puncticeps*)，單孔鞋底魚 (*C. itinus*)，喬氏鞋底魚 (*C. joyneri*)，薄鞋底魚 (*C. gracilis*)，短鞋底魚 (*C. abbreviatus*)，其中多鰭無線鰨，書顏鞋底魚，斷線鞋底魚，及單孔鞋底魚 4 種為臺灣新記錄種。本報告將提供屬與種之檢索及圖文說明。