

# KURENAI : Kyoto University Research Information Repository

Title	THE GENERA POLYCERA, PALIO, GREILADA AND THECACERA FROM JAPAN (NUDIBRANCHIA-POLYCERIDAE)
Author(s)	Baba, Kikutaro
Citation	PUBLICATIONS OF THE SETO MARINE BIOLOGICAL LABORATORY (1960), 8(1): 75-78
Issue Date	1960-05-30
URL	<a href="http://hdl.handle.net/2433/174699">http://hdl.handle.net/2433/174699</a>
Right	
Type	Departmental Bulletin Paper
Textversion	publisher

THE GENERA *POLYCERA*, *PALIO*, *GREILADA*  
AND *THECACERA* FROM JAPAN  
(NUDIBRANCHIA-POLYCERIDAE)

KIKUTARÔ BABA

Biological Laboratory, Osaka Gakugei University

---

*With Plate VI*

---

Two species of the genus *Polycera* have hitherto been recorded from our territory:

1. *Polycera fujitai* BABA, 1937 Fujita-umiushi  
*Loc.*: Kanazawa near Yokohama; Sagami Bay; Osaka Bay; Amakusa;  
Toyama Bay; Shishizu, W. coast of Noto Peninsula; Tsuruga Bay.
2. *Polycera japonica* BABA, 1949 Okan-umiushi  
*Loc.*: Sagami Bay.

The genera *Palio*<sup>1)</sup>, *Greilada*<sup>2)</sup> and *Thecacera* are here added to our list of the nudibranch fauna.

*Greilada abei* BABA, n. sp.

Kosode-umiushi (n. n.)

(Pl. VI, Figs. 1A-1D)

Length about 15 mm. Body limaciform, smooth above (non-tuberculate), no pallial ridge on each side. Velar papillae 6, long and digitiform. Rhinophores perfoliate, non-retractile. Branchial plumes 7, simply pinnate, non-retractile; no exo-branchial appendage on each side of the gill. Oral veil semicircular; foot-corners angulated. General body-colour translucent yellowish white, the above with black spots interspersed among the orange ones. Rhinophores and velar papillae black; gills yellowish white with black tips; sole without markings. Jaw-plates with a wing as in the genus *Polycera*. Radula yellow, the formula  $10 \times 2.2.0.2.2$ . Teeth also as in *Polycera*: first lateral hamate, and with a hook about half way down; second lateral larger, with a spur near the base; outer

---

1, 2) Or the *Palio* and *Greilada* sections of the genus *Polycera* (see ODHNER, 1941, p. 18).

laterals simply scale-like.

*Loc.*: Amaharashi, Toyama Bay (June 1958, 1 sp., coll. by Mr. ABE; Aug. 1959, 1 sp., coll. by Mr. FUTATSUKA). On shore.

The present animal by lacking the exo-branchial appendage is to be referred to the genus *Greilada*. But it may be separated from the previously known species, *G. elegans* BERGH, 1894 from the Adriatic Sea and Banyuls (see PRUVOT-FOL, 1951, pp. 34-35, pl. 3, figs. 3-4) and *G. messinensis* (ODHNER, 1941) from Messina (see ODHNER, 1941, pp. 7-10, figs. 5-9), by having long digitiform velar papillae and an unmistakable body-colours.

*Palio amakusana* BABA, n. sp.

Ebisu-umiushi (n. n.)

(Pl. VI, Figs. 2A-2C)

Length 12-20 mm. With 4-6 exo-branchial appendages on each side; they are slightly larger than those on the back-margins. Papillae on velum-margin 12-14. Back, sides and tail covered with small conical papillae. Rhinophores non-retractile; gills 5, tripinnate, non-retractile; oral tentacles lobiform; foot-corners angulated. General body-colour yellowish brown, somewhat darker on back and sides. Rhinophores bright orange above, yellow at tip. Gills yellowish brown. Exo-branchial appendages white; other papillae on the pallial margin and on the integument also whitish. Sole yellowish brown. Jaw-plates triangular, yellowish brown, and without a wing (genus *Palio*). Radula colourless, the formula 18-20 × 5.2.0.2.5, the teeth shaped as in *Polycera*. First lateral small, with a hook about half way down; second lateral larger, and with a basal spur; outer laterals scale-like.

*Loc.*: Tomioka, Amakusa (Jan. and Feb. 1937, 3 sps.). Abugashima, Toyama Bay (June 1957, 5 sps., coll. by Mr. ABE). On shores.

Our specimens agree with the Atlantic and Mediterranean species, *Palio dubia* M. SARS, 1829 = *P. lessonii* (D'ORBIGNY, 1837) in the body-form, in the jaws and in the radula (see especially ALDER & HANCOCK, 1848, Fam. 1, pl. 24, figs. 1-8, *Polycera lessonii*). But they differ from it slightly in the detail of the colours (yellowish brown body-colour, bright orange rhinophores, and white appendages or papillae of the body). They are provisionally regarded here as forming a separate species.

*Thecacera pennigera* (MONTAGU, 1815)

Mizutama-umiushi (n. n.)

(Pl. VI, Figs. 3A-3C)

*Doris pennigera* MONTAGU, 1815, pp. 17-18, pl. 4, fig. 5.—England.

*Thecacera pennigera* ALDER & HANCOCK, 1855, fam. 1, pl. 21a, figs. 1-9.—England; MARCUS, 1957, pp. 426-429, figs. 91-102.—Brazil.

Length 12-25 mm. Shape of body and colours nearly as in the Atlantic *pennigera*. With elevated rhinophore-sheaths. Gills 5, bipinnate, non-retractile. With a single post-branchial process on each side; it is long and conical. No pallial ridge. Integument smooth above. Foot-corners produced into short horns. General ground-colour translucent yellowish white, the back and sides scattered with yellow or orange-yellow spots in varying number; there are additional black spots interspersed among the orange ones. Rhinophores and branchial plumes whitish. Sole also whitish without markings. Jaws and radula as in the Atlantic *pennigera*. Jaw-plates provided each with a wing. Radula formula 10-13×2.2.0.2.2; first lateral hamate with a hook about half way down; second lateral larger, with a spur near the base; outer laterals simply scale-like.

*Loc.*: Sugashima near Toba (June 1943, 2 sps., coll. by Dr. SUGIYAMA). Near Mukaishima, Inland Sea of Seto (May 1955, Apr. 1956 and '59, 4 sps., coll. by Dr. INABA). Abugashima and Amaharashi, Toyama Bay (May 1952 and Apr. 1957, 3 sps., coll. by Mr. ABE). Always on shores.

*Dist.*: Atlantic, Mediterranean and Brazil.

There are six species of *Thecacera* known from the world. Our specimens are referred to *pennigera* as above, but they do not have the brightness of the orange spots shown in the figures of ALDER and HANCOCK, 1855.

Acknowledgements: I wish to thank the following gentlemen for giving me opportunities to examine many of the specimens which they had collected at different places: Dr. Masao SUGIYAMA (Sugashima Marine Biological Laboratory, Nagoya University); Dr. Akihiko INABA (Mukaishima Marine Biological Laboratory, Hiroshima University); Messrs. Takeo ABE and Seigoro FUTATSUKA (Takaoka Senior High School, Toyama Pref.).

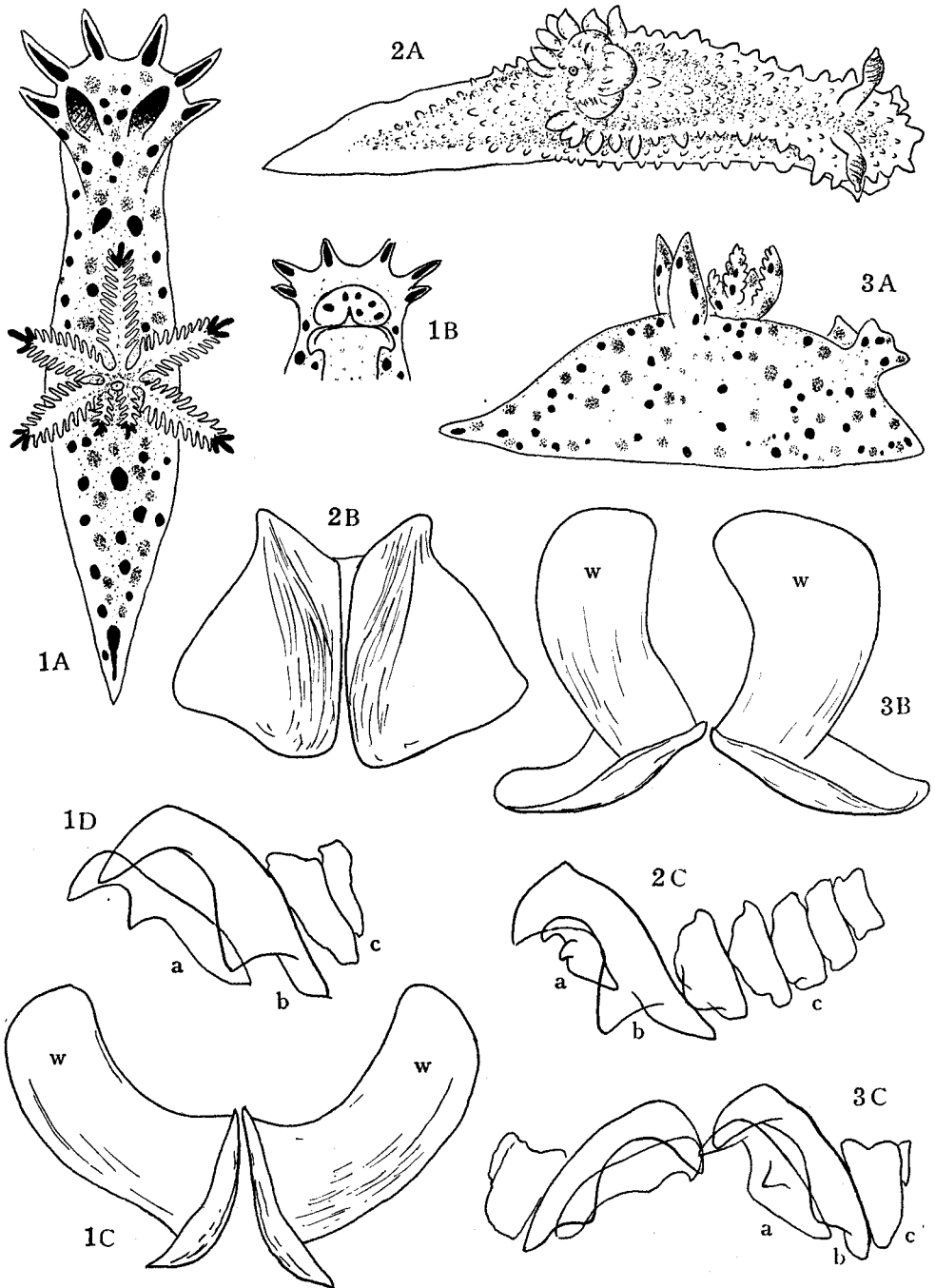
#### REFERENCES

- ALDER, J. & HANCOCK, A. 1848, '55. A monograph of the British nudibranchiate Mollusca, with figures of all the species. Pts. 4, 7, London.
- BABA, K. 1937. Opisthobranchia of Japan (II). Journ. Dept. Agric. Kyushu Imp. Univ., vol. 5, no. 7.
- 1949. Opisthobranchia of Sagami Bay. Iwanami Shoten, Tokyo.
- BARNARD, K. H. 1933. Description of a new species of *Thecacera*. Journ. Conch. London, vol. 19, no. 9.
- BERGH, R. 1894. Eine neue Gattung von Polyceraden (*Greilada*). Arch. f. Naturgesch., Bd. 60, No. 1. (not consulted)
- MACNAE, W. 1959?. The families Polyceridae and Goniodorididae (Mollusca, Nudibranchiata) in Southern Africa. Trans. Roy. Soc. S. Africa, vol. 35, pt. 4.
- MARCUS, E. 1957. On Opisthobranchia from Brazil (2). Journ. Linn. Soc. London, Zool., vol. 43, no. 292.
- MONTAGU, G. 1815. Descriptions of several new or rare animals, principally marine, discovered

- on the south coast of Devonshire. Trans. Linn. Soc. London, vol. 11, pt. 1.
- ODHNER, N. 1941. New polycerid nudibranchiate Mollusca and remarks on this family. K. Vet. O. Vitterh. Samh. Handl., F. 6, Ser. B, Bd. 1, No. 11.
- PRUVOT-FOL, A. 1950. Le genre *Thecacera* FLEMING 1828 et une espèce nouvelle: *Thecacera darwini*. Journ. Conchyliol. Paris, tom. 90, no. 1.
- 1951. Étude des nudibranches de la Méditerranée. Arch. Zool. Exp. et Gén., tom. 88, fasc. 1.

#### EXPLANATION OF PLATE VI

- Figs. 1A-1D. *Greilada abei*. 1A. Animal from Amaharashi, Toyama Bay (June 22, 1958, length 15 mm, original fig. taken by Mr. ABE); 1B. Head and foot from below; 1C. Jaw-plates ( $\times 45$ ), w. wing; 1D. A half-row of radula ( $\times 140$ ), a. 1st lateral, b. 2nd lateral, c. outer laterals.
- Figs. 2A-2C. *Palio amakusana*. 2A. Animal from Tomioka, Amakusa (Jan. 31, 1937, length 12 mm); 2B. Jaw-plates ( $\times 40$ ); 2C. A half-row of radula ( $\times 240$ ), a. 1st lateral, b. 2nd lateral, c. outer laterals.
- Figs. 3A-3C. *Thecacera pennigera*. 3A. Animal from Sugashima near Toba (June 30, 1943, length 12 mm, original fig. taken by Dr. SUGIYAMA); 3B. Jaw-plates ( $\times 40$ ), w. wing; 3C. A row of radula ( $\times 100$ ), a. 1st lateral, b. 2nd lateral, c. outer laterals.



K. BABA: THE GENERA *POLYCERA*, *PALIO*, *GREILADA* AND *THECACERA*.