

アゴハタ表皮の組織学的研究

誌名	日本水産學會誌
ISSN	00215392
著者名	会田,勝美 日比谷,京 大島,泰克 橋本,芳郎 Randall,J.E.
発行元	日本水産學會
巻/号	39巻12号
掲載ページ	p. 1351-1351
発行年月	1973年12月

農林水産省 農林水産技術会議事務局筑波産学連携支援センター
Tsukuba Business-Academia Cooperation Support Center, Agriculture, Forestry and Fisheries Research Council
Secretariat



Short Paper

Structure of the Skin of the Soapfish
*Pogonoperca punctata**

Recently we have reported that a peculiar type of ichthyotoxin having a hemolytic activity is widely distributed in the mucus of fishes belonging to the family Grammistidae. Special mucous

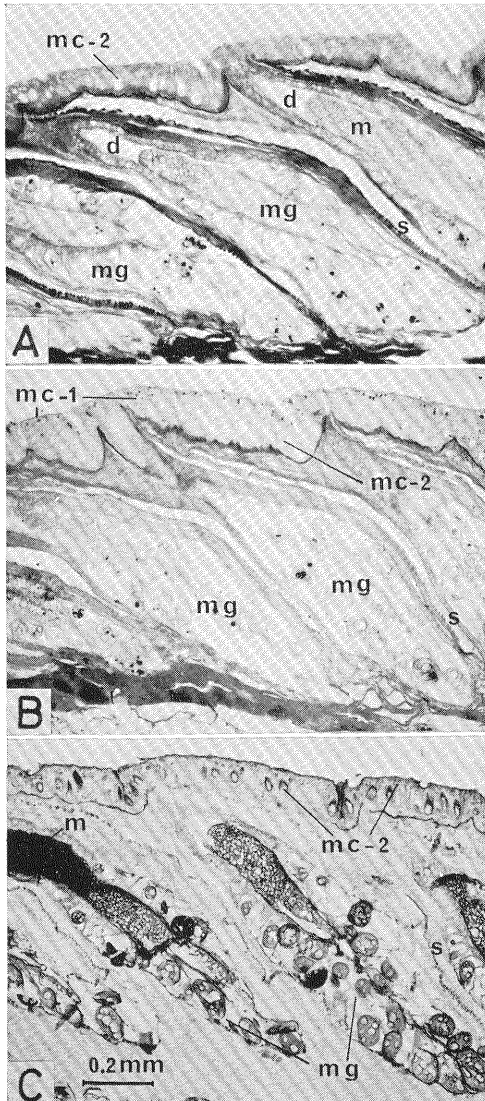


Plate I. Sections of the skin of *P. punctata*. A: Hematoxylin-eosin preparation. B: PAS preparation. C: Sudan Black B preparation. (mc-1=mucous cell, Type I; mc-2=mucous cell, Type II; mg=mucous gland; s=scale; m=mucus; d=duct)

cells were observed in the skin of the nine grammistids that were studied.¹⁾ The toxin was designated as grammistin and demonstrated to consist of several allied polypeptides.²⁾

In the previous study, the specimen of *Pogonoperca punctata* was a frozen sample, and a satisfactory observation of the epidermis was impossible due to alteration from freezing.¹⁾ We have recently obtained a live specimen of this species from Mr. M. Fukushima, who collected it at Okinoerabu Island. It was 22 cm in total length.

As shown in Plate I, there are two types of mucous cells in the epidermis and well-developed mucous glands in the dermis under the scales. The mucous cells of Type I are small, arranged along the upper layer of the epidermis, and positive to PAS reaction but negative to Sudan Black B staining. This type is the usual one found in the epidermis of fishes in general. The mucous cells of Type II are negative to PAS reaction and positive to Sudan Black B staining. The smaller cells of this type are found at the upper layer of the epidermis and the larger ones, or possibly mucous depots which contain many small granules stainable with Sudan Black B, in the lower layer. Ducts leading from the dermal glands to the epidermal surface are recognized.

The structure of the skin of *P. punctata* is very similar to that of *Grammistes sexlineatus*.

Katsumi AIDA and Takashi HIBIYA
Laboratory of Fish Physiology, Fac. of Agr.,
Univ. of Tokyo, Tokyo, Japan

Yasukatsu OSHIMA and Yoshiro HASHIMOTO
Laboratory of Marine Biochemistry, Fac. of
Agr., Univ. of Tokyo, Tokyo, Japan

John E. RANDALL
Bernice P. Bishop Museum, Honolulu,
Hawaii, U.S.A.

References

- 1) J. E. RANDALL, K. AIDA, T. HIBIYA, N. MITSUURA, H. KAMIYA, and Y. HASHIMOTO: *Publ. Seto Mar. Biol. Lab.*, XIX, 157-190 (1971).
- 2) Y. HASHIMOTO and Y. OSHIMA: *Toxicol.*, 10, 279-284 (1972).

Received Sept. 14, 1973

* アゴハタ表皮の組織学的研究 会田勝美, 日比谷京: 東京大学農学部魚類生理学研究室. 大島泰克, 橋本芳郎: 東京大学農学部水産化学研究室. J. E. ランダール: ビショップ博物館