Chromosomes of a Rare Callionymid, *Draculo mirabilis*

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Draculo mirabilis Snyder, characterized by having no spinous dorsal fin, is a peculiar species of the family Callionymidae. The present species has been rarely collected (Snyder, 1911; Li, 1960; Kobayashi and Abe, 1962, Arai, 1971). There is no report on callionymid chromosomes, except for that of *Callionymus richardsoni* obtained by the gonad section method (Nogusa, 1960).

Recently, we had a chance to observe chromosomes of *Draculo mirabilis* collected from southern Hokkaido.

Material and methods

A female specimen, 43.2 mm in total length, was used. This specimen was caught at Usujiri (41°54′N; 140°57′E), southern Hokkaido, by a beach seine on June 27, 1978, and deposited in the Laboratory of Marine Zoology, Hokkaido University, registered under the number HUMZ 76023.

The specimen was kept alive for five hours at room temperature after the injection of 50 μg colchicine. The gills were minced with a pair of scissors, and fixed in Carnoy solution containing two parts of methyl alcohol and one part of acetic acid, after treatment in 0.075 M KCl solution for 35 minutes. Preparations were made following the routine air-drying method, and staining was performed with Giemsa solution.

The classification of chromosomes was after Levan et al. (1964).

Results and discussion

The diploid chromosome number is 36 (Table 1). The karyotype comprises 18 pairs of acrocentric chromosomes (Fig. 1). The arm number is 36. The chromosomes show a gradation from largest to smallest in size (Fig. 1B).

Compared with the data presented by Ojima et al. (1976), the present species is peculiar in having a low number of diploid chromosomes and a karyotype consisting only of acrocentric chromosomes.

Nogusa (1960) reported that *Callionymus richardsoni* has 38 diploid chromosomes, although its karyotype remains unknown. An inference to be drawn from the chromosome numbers of *Callionymus richardsoni* and *Draculo mirabilis* is that callionymid fishes may be characterized by a low number of diploid chromosomes.

Table 1. Frequency distribution of diploid chromosome counts in *Draculo mirabilis*.

2n								Total
31	32	33	34	35	36	37	38	
1	1	3	1	3	19	4	2	34

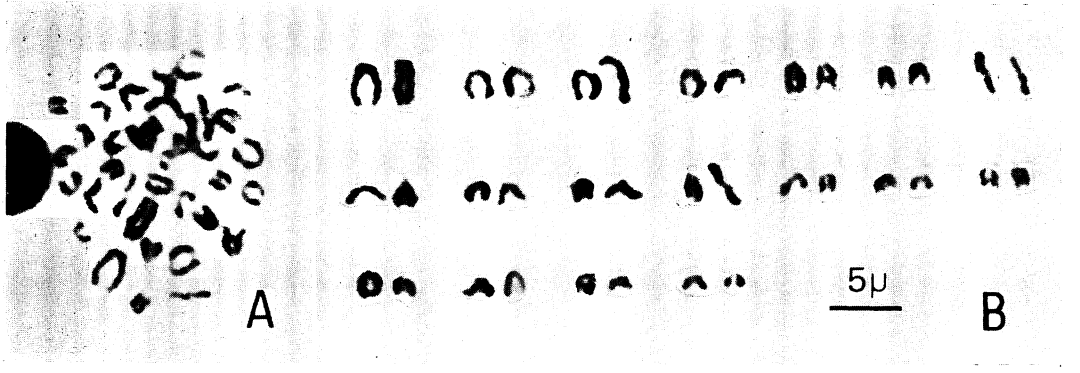

Fig. 1. Photomicrograph of mitotic metaphase chromosomes and karyotype from gill epithelial cell of *Draculo mirabilis* Snyder. A: Metaphase chromosomes. 2n=36. ×1960. B: Karyotype from Fig. A. NF=36. ×1960.

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バケヌメリの染色体

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バケヌメリは第一背鰭を欠くことで特徴づけられるネズッポ科魚類で，世界でもあまり採集記録のないめずらしい小型の種類である．

今回，北海道南茅部町臼尻で採集された雌個体を使って，染色体の観察を試みた．その結果，2n=36 で，核型は 18 対の端部着糸染色体のみにより構成されていることが判明した．本種におけるように，2n が少なく，核型がすべて端部着糸染色体によって構成される魚類は，真骨類の中では比較的めずらしい．本科魚類の染色体について，Nogusa (1960) はネズミゴチでは 2n=38 であると報告している．このことと今回の結果とを考え合わせると，ネズッポ科魚類は 2n が少ないことで特徴づけられるらしい．

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