

Pyrgo rasheedi, n. sp. (Foraminifera)

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Abstract

This paper proposes a new species of benthic Foraminifera, *Pyrgo rasheedi* HATTA, n. sp. which was found in mud facies sediments of the Madang lagoon, Papua New Guinea. This new species includes specimens recorded by RASHEED (1971), HAIG (1988) and LOEBLICH and TAPPAN (1994) as *Pyrgo pisum* (SCHLUMBERGER).

Key words: Benthic foraminifera, *Pyrgo rasheedi*, new species, Papua New Guinea

Introduction

A new species of *Pyrgo* was found during the study of benthic foraminiferal assemblages at the Madang Lagoon, Papua New Guinea. The intention of this investigation was to make clear the distribution and depth of foraminiferal assemblages. To make clear the distribution and depth of Foraminifera it is useful to analyze the paleo-environment using fossil Foraminifera. Also to clarify the habitat of Foraminifera is helpful to do the environment education. Text-fig. 1 shows the exact location of the 23 sampling stations. This new species was found in 4 stations. The depth of producing of this new species was about 30 m and the material which contained the new species was mud sediments. Table 1 shows the sampling stations, location, depth, position, material of the sample, and the producing stations of this new species. This new species was not found in the shallower and sandy deposits. The feature of this new species is the tooth in the aperture. The new species has an aperture with a reindeer horn-shaped tooth at the adult stage.

Description of *Pyrgo rasheedi* HATTA, n. sp.

Order FORAMINIFERIDA EICHWALD, 1830

Suborder MILIOLINA DELAGE and HEROUARD, 1896

Superfamily MILIOLACEA

EHRENBERG, 1839

Family HAUERINIDAE SCHWAGER, 1876

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Genus *Pyrgo* DEFRANCE, 1824*Pyrgo rasheedi* HATTA, n. sp.

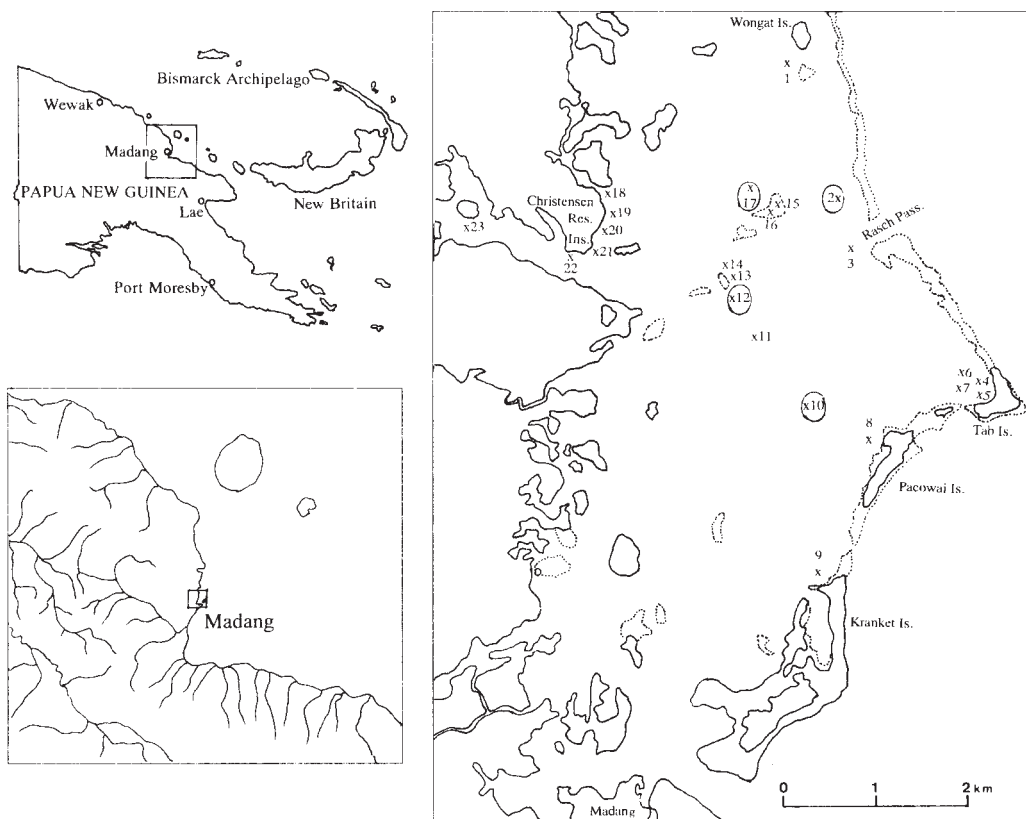
(Pl. 1, Figs. 1a -3b)

Pyrgo pisum (SCHLUMBERGER); -RASHEED, 1971, p. 42, pl. 13, fig. 2.; -LOEBLICH and T APPAN, 1994, pl. 93, figs. 1-14.*Pyrgo* sp.; -HAIG, 1988, pl. 4, figs. 5, 6 .

Description: Test ovate in young to spherical in adult specimens, biloculine; periphery rounded; last chamber envelops half of penultimate chamber; wall calcareous, imperforate, porcelaneous; aperture rounded with a tooth projecting from the apertural face; tooth changes from slightly bifid through hoof-shaped bifid to reindeer horn-shape toward the full-grown adult stage.

Holotype: pl. 1, fig. 1; Width: 1.3 mm; Length: 1.5 mm

Location of holotype: Holotype was gathered from the lagoon, north of Madang city, Papua



Text-fig.1 Map showing location of sampling stations.

(X mark shows sampling station and the samples of number in circle include this new species)

Table 1. Producing stations of *Pyrgo rasheedi*, and Location, Depth, Position and Material

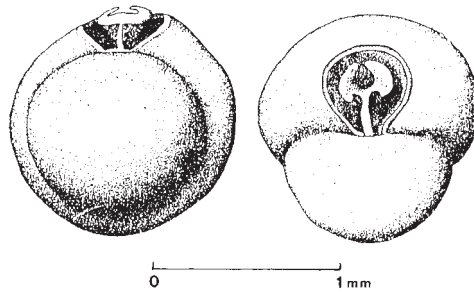
Sampling Station No.	Collecting Location	Depth	Collecting Position, Material	Producing of <i>Pyrgo rasheedi</i>
Madang 1	South of Wongat Is.	5 m	reef flat, fine sand	
Madang 2	West of Rasch Pass.	ca.30 m	inside lagoon, mud	○
Madang 3	Rasch Passage	ca.40 m	passage, sand	
Madang 4	West of Tab Is.	4 m	near beach, sand	
Madang 5	West of Tab Is.	3 m	near beach, coarse sand	
Madang 6	West of Tab Is.	5 m	near beach, fine sand	
Madang 7	West of Tab Is.	5 m	near beach, (Attached to Calcareous algae)	
Madang 8	West of Pacowai Is.	9 m	inside lagoon, fine sand	
Madang 9	North of Kranket Is.	5 m	near beach, fine sand	
Madang 10	Central part of the lagoon	ca.30 m	inside lagoon, mud	○
Madang 11	Central part of the lagoon	ca.20 m	inside lagoon, mud	
Madang 12	Central part of the lagoon	ca.30 m	inside lagoon, mud	○
Madang 13	Central part of the lagoon	5 m	reef flat, sand	
Madang 14	Central part of the lagoon	5 m	reef flat, (Attached to Halimeda)	
Madang 15	Central part of the lagoon	5 m	reef flat, fine sand	
Madang 16	Central part of the lagoon	3 m	reef flat, sand	
Madang 17	Central part of the lagoon	ca.30 m	inside lagoon, mud	○
Madang 18	North of the Christensen Res. Ins.	4 m	shoal, sand	
Madang 19	North of the Christensen Res. Ins.	5 m	shoal, sand	
Madang 20	Near the Christensen Res. Ins.	1 m	beach, (Attached to Halimeda)	
Madang 21	Near the Christensen Res. Ins.	1 m	beach, (Attached to Eelgrass)	
Madang 22	Near the Christensen Res. Ins.	3 m	beach, sand	
Madang 23	A inlet near the Christensen Res. Ins.	7 m	inlet, mud	

New Guinea (Madang 12).

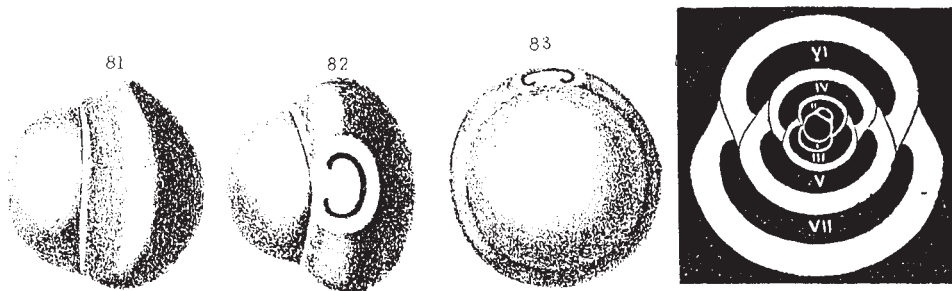
Collection: Holotype is stored at the Department of Science Education, Faculty of Education, Kagoshima University.

Occurrence: Sahul Shelf and Timor Sea; off Port Moresby, South of Papua New Guinea; Madang lagoon, Papua New Guinea.

Remarks: This new species includes some specimens recorded by RASHEED (1971), HAIG (1988) and LOEBLICH and TAPPAN (1994). At present, reports of this species are limited to the mud facies of coral reef region of Papua New Guinea, and Sahul Shelf and



Text-fig. 2 *Pyrgo pisum* of RASHEED, 1971



Text-fig. 3 *Biloculina pisum* SCHLUMBERGER, 1891 (original figures)
(81-83:x40; Fig.31:x50)

Timor Sea.

RASHEED (1971) designated one species from the coral reef region at the south of Papua New Guinea, as *Pyrgo pisum* (SCHLUMBERGER) (Text-fig. 2), cited *Biloculina bulloides* D'ORBIGNY of MILLETT (1898) as his *Pyrgo pisum*, that MILLETT's *B. bulloides* D'ORBIGNY, was not the *B. bulloides* D'ORBIGNY (1826). MILLETT (1898) himself showed no figures but cited the figure of BRADY (1884). Both *Biloculina pisum* (SCHLUMBERGER) and *B. bulloides* D'ORBIGNY differ from the new species in having a simple tooth.

LOEBLICH and TAPPAN (1994) also described this new species from the Sahul Shelf at the north Australia and the Timor Sea as *P. pisum* (SCHLUMBERGER). They cited both *Pyrgo pisum* of RASHEED (1971) and SCHLUMBERGER (1891). But *Biloculina pisum* of SCHLUMBERGER (1891) has a broadly flattened tooth.

Text-fig. 3 demonstrates the holotype and lateral cross section of *Biloculina pisum* by SCHLUMBERGER (1891). There is no account of the aperture on his description, but the figures indicate a distinct flat tooth. The outline of his *Biloculina pisum* is similar to the new species, but the profile of the lateral cross section is more angular and the flat, board like tooth of *B. pisum* differs from the complex circle tooth of the new species.

HAIG (1988) described a young specimen from the lagoon near Port Moresby, South

Explanation on Plate 1

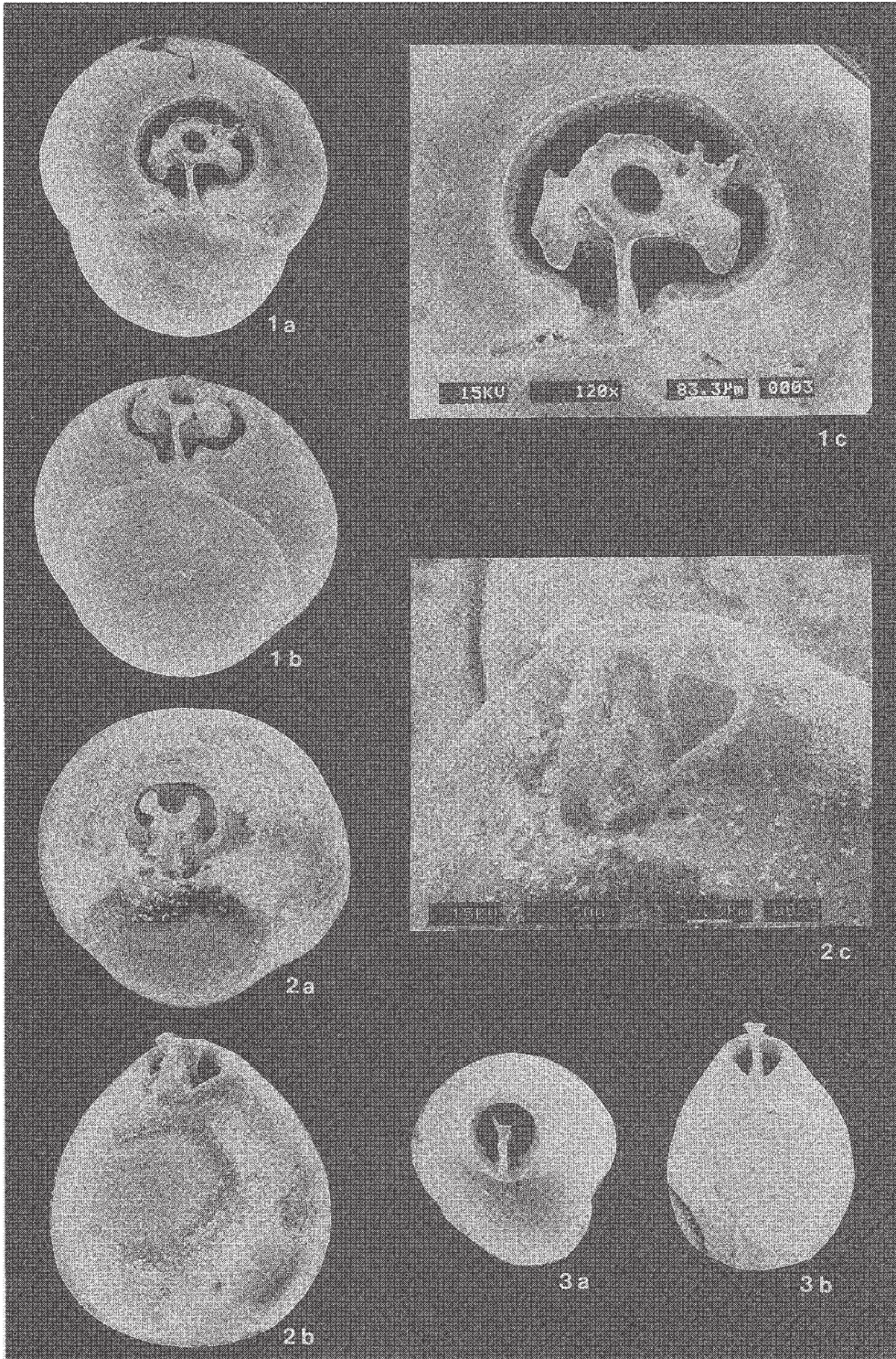
Pyrgo rasheedi n. sp.

Fig. 1a-1c: Adult, holotype, 1a-1b x35, 1c x84

Fig. 2a-2c: Young form, 1a-1b x70, 1c x210

Fig. 3a-3b: Juvenile, 3a-3b x70

Plate 1



of Papua New Guinea as *Pyrgo* sp. He mentioned that *Pyrgo* sp. is the same as *P. pisum* of RASHEED (1971), and that *P. pisum* of RASHEED (1971) is not *Biloculina pisum* of SCHLUMBERGER, (1891)

As mentioned above, *Pyrgo pisum* (SCHLUMBERGER) of RASHEED (1971) is junior homonym and leads to the new name presented in this paper.

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