

Two New Species of Diplommatina from Thailand (Prosobranchia: Diplommatinidae)

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ABSTRACT.—Two new species of Diplommatinidae (Prosobranchia: Diplommatinidae) are described from Thailand. *Diplommatina inthanon* n. sp. was collected from the highest peak of Thailand, Doi Inthanon at about 2,600 meters above sea level on moss colony of a walking trail. The new species has a conical-shaped, sinistral with frequent radial ribs without spiral striation. This is the second largest shell size of Thai *Diplommatina* after the first *Diplommatina gigas* Panha & Burch 2001. *Diplommatina siriphumi* n. sp. has a pupa-shaped, sinistral with strong radial ribs and weak spiral striation. The unique characteristic of the new species is the smooth surface with no radial rib on almost half area of the ultimate whorl.

KEY WORDS: *Diplommatina inthanon*; *Diplommatina siriphumi*; Prosobranchia; Diplommatinidae; Thailand.

INTRODUCTION

The land snail genus *Diplommatina* Benson 1849 occurs throughout southern, southeastern and eastern Asia and includes hundreds of species (e.g., see Gude, 1921, who recorded 82 species from India and neighboring areas). Undoubtedly, many species are yet to be discovered. For example, recently Vermeulen (1993) recorded 50 species for the island of Borneo, 25 species of which were previously undescribed. The genus *Diplommatina* in Thailand was first described by Mollendorff in 1891 as *Diplommatina (Samuiana) samuiana* and *D. (sinica) canaliculata* collected from

Samui Island, southern Thailand. Panha (1996) and Panha and Burch (1996) described seven new species of *Diplommatina* collected from various localities of Thailand. Recently Panha and Burch (2001) described 21 new species of *Diplommatina* from Thailand which included dichotomous key of Thai *Diplommatina*.

It is noticeable that rather similar shell forms occur extralimittally, often at considerable distances. At present it is not known whether these similarities are due to morphological convergence, or to evolutionary parallelism, or because the population belong to relic sibling species with a wider previous distribution and subsequently have experienced little evolution.

During a survey of Thai land snails under the project title "Taxonomy of Terrestrial Microsnails of Thailand", we discovered two new species of *Diplommatina* at Doi Inthanon National Park (Fig. 1), Chiang Mai Province at almost the highest peak of Thailand about 2,600

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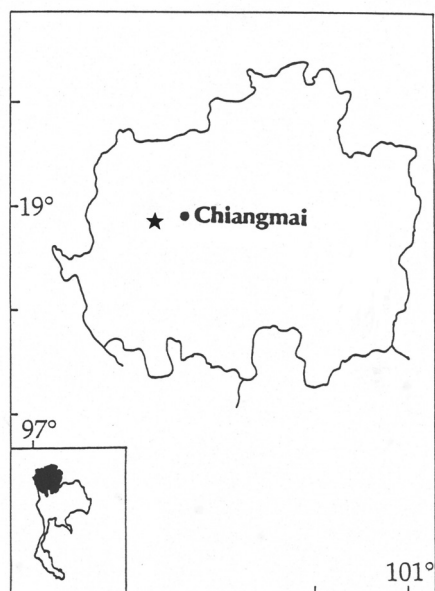


FIGURE 1. Map showing locations of type localities, Chiang Mai area and Doi Inthanon National Park (star).

meters above sea level on moss colony. The new species are described below.

Diplommatina inthanon n. sp.
(Fig. 2)

Description of holotype.—Shell large conical -shaped, sinistral, with 7 rounded whorls that increase in size. Penultimate and last whorl are largest with clear frequent radial ribs. Embryonic shell area covered all first whorl. The most prominent characteristic of the new species is the large shell with half circled aperture, peristome double expanded almost adnate to last whorl; shell height 5.3 mm, shell width 2.4 mm, aperture length 1.6 mm; collumellaris is almost rudiment. The dimension of holotype and 7 paratype shells are given in Table 1.

Type locality.—Thailand, Doi Inthanon National Park, Chiang Mai Province, at 2600 meters elevation (CUMZ, IDi 087).

Etymology.—The specific epithet *inthanon* is from the name of Doi Inthanon National Park, the place we collected the specimens.

TABLE 1. Holotype and paratype dimensions (in mm) of *Diplommatina inthanon* n. sp.

Types	Height	Width	Aperture length
Holotype	5.3	2.4	1.6
Paratype			
1	5.2	2.4	1.6
2	5.2	2.4	1.6
3	5.2	2.4	1.6
4	5.1	2.4	1.6
5	5.1	2.4	1.6
6	5.1	2.4	1.6
7	5.1	2.4	1.6

Type material.—The holotype (CUMZ, IDi 087) is deposited in the Chulalongkorn University Zoological Museum together with four shell paratypes (CUMZ, IDi 088); three shell paratypes are in the Museum of Zoology, University of Michigan (CUMZ, IDi 089), Ann Arbor; legacy: S. Panha.

Habitat and geographic distribution.—*Diplommatina inthanon* is known only from Doi Inthanon National Park, Chiang Mai Province. The snails live on moss colony which live on various big trees. Some unidentified clausilid snails were also found almost the same habitat.

Diagnosis.—The large shell with frequent radial ribs but without spiral striation are unique characteristics of the new species. Peristome entire, double expanded almost adnate to last whorl.

Remarks.—The shell shape in general is similar to that of the southern species *D. gigas* Panha & Burch 1996 (Fig. 4).

Diplommatina siriphumi n. sp.
(Fig. 3)

Description of holotype.—shell pupa-shaped, sinistral, with 5 rounded whorls that increase in size. Penultimate whorl is largest with clear radial ribs. Last whorl is a little bit smaller than penultimate whorl, and also with clear radial ribs except at the aperture side almost

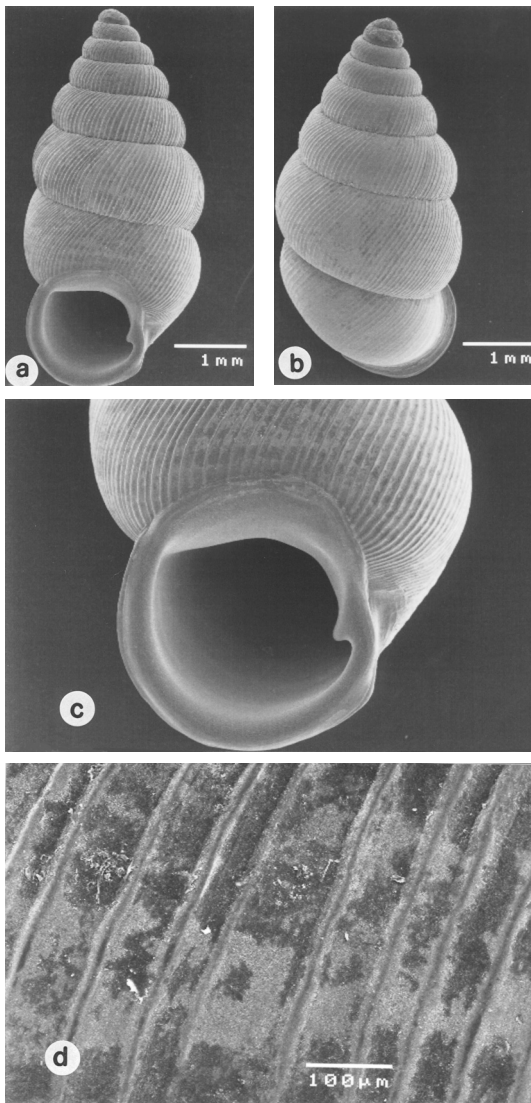


FIGURE 2. *Diplommatica inthanon* n. sp. Holotype: (a, b) apertural and adapertural views; (c) aperture with expanded, double lipped peristome and collumellaris; (d) radial ribs without spiral striation.

half portion of last whorl has smooth area with very weak spiral striation. Embryonic shell area covered all first whorl. The most prominent characteristic of the new species is the smooth surface without radial rib on almost half area of the ultimate whorl at shell aperture side. This may be the very unique character that ever recorded in the genus *Diplommatica*; shell height 2.1 mm, shell width 1.1 mm, aperture

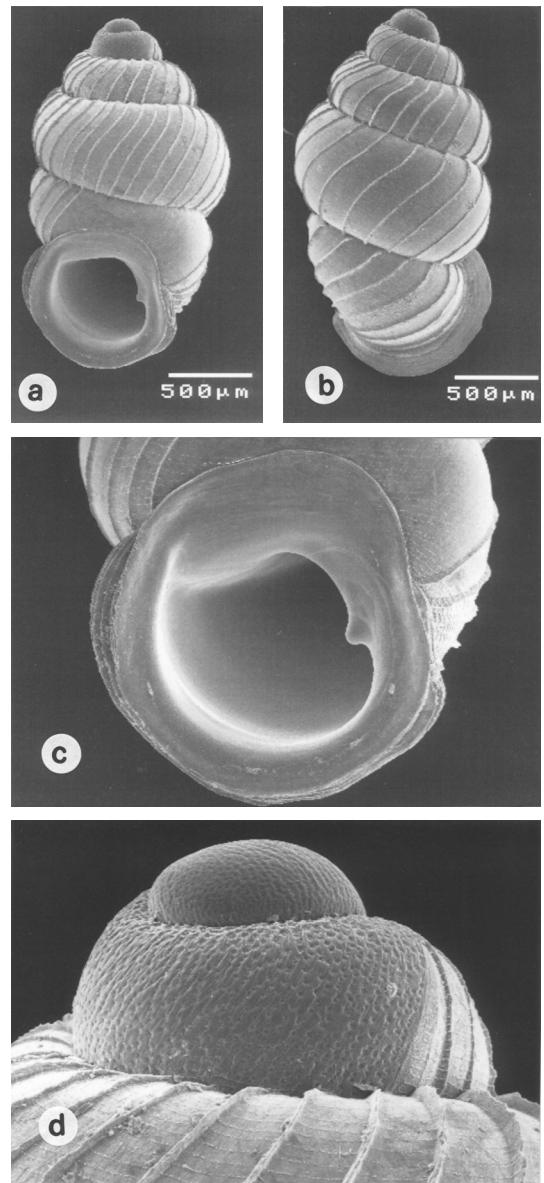


FIGURE 3. *Diplommatica siriphumi* n. sp. Holotype: (a, b) apertural and adapertural views; (c) aperture with expanded, double lipped peristome and collumellaris; (d) protoconch and first and second whorls with distinct radial ribs and fine spiral striation between the ribs.

length 0.6 mm; collumellaris is almost rudiment. The dimension of holotype and 10 paratype shells are given in Table 2.

Type locality.—Thailand, Siriphumi Waterfall, Doi Inthanon National Park, Chiang Mai

TABLE 2. Holotype and paratype dimensions (in mm) of *Diplommatina siriphumi* n. sp.

Types	Height	Width	Aperture length
Holotype	2.1	1.1	0.6
Paratype			
1	2.1	1.1	0.6
2	2.1	1.1	0.6
3	2.1	1.1	0.6
4	2.0	1.1	0.6
5	2.0	1.1	0.6
6	2.0	1.1	0.6
7	2.0	1.1	0.6
8	2.0	1.1	0.6
9	2.0	1.1	0.6
10	2.0	1.1	0.6

Province, 18°32'44"N 98°31'8"E, 1900 meters elevation (CUMZ, IDi 090).

Etymology.—The specific epithet *siriphumi* is from the name of Siriphumi Waterfall, Doi Inthanon National Park, the place we collected the specimens.

Type material.—The holotype (CUMZ, IDi 090) is deposited in the Chulalongkorn University Zoological Museum together with six shell paratypes (CUMZ, IDi 091); four shell paratypes are in the Museum of Zoology, University of Michigan (CUMZ, IDi 092), Ann Arbor; legacy: S. Panha.

Habitat and geographic distribution.—*Diplommatina siriphumi* is known only from Siriphumi Waterfall, Doi Inthanon National Park, Chiang Mai Province. The snails live on the rocks near the stream. *Cryptozonia siamensis* (Tomlin) was also found at the same habitat.

Diagnosis.—The smooth area on ultimate whorl and the small collumellaris are unique characteristics of the new species. Peristome entire, double expanded.

Remarks.—The shell shape in general is similar to that of the southern species *D. krabiensis* Panha & Burch 1996 (Fig. 4).

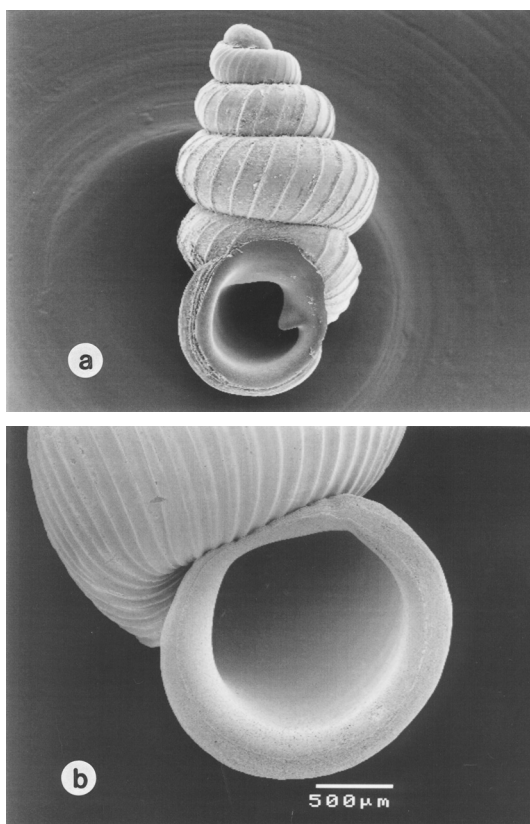


FIGURE 4. (a) *Diplommatina krabiensis* Panha & Burch 1996; (b) single lipped aperture of *Diplommatina gigas* Panha & Burch 2001.

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