A Checklist of *Mastogloia* (Class Bacillariophyceae) of the Philippines

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This is an attempt to present a unified account of all known diatoms in the genus *Mastogloia*, class Bacillariophyceae, of the Philippines up to 2008. A total of 77 taxa are listed. Included herewith are the references that originally described or cited the taxon, the ecological habitat records for each taxon, and the repository places of some exsiccate materials. There are four new species and one new record of *Mastogloia* in this compendium.

Key Words: checklist, diatoms, marine diatoms, *Mastogloia*, pennate diatoms,

**INTRODUCTION**

An estimated 410 taxa have been described in the genus *Mastogloia* in 1988 (Novenario 1989). This number is about 1.5 times greater than what is listed in Van Landingham’s (1971) catalogue of diatoms. About 19.5% of this enumeration are reported from the Philippines. Most of these taxonomic works were done by foreign authors (Mann 1925; Podzorski and Hakansson 1987). However, these references are not locally available because they are either out of print or grossly expensive. Hence, this updated compendium presents for the first time a unified account of all taxa recognized under the genus *Mastogloia* from the Philippines for future systematic and ecological studies.

All known taxa in *Mastogloia* for the Philippines were mostly taken from published reports. Additional taxa, about 22% of the total number, were gathered by MRMG from actual examination of diatom slides stored in different herbaria abroad, such as the Natural History Museum (BMNH, formerly British Museum) in London, England, which include the collections of F. Adams, T. Comber, E. Grove, and Bess. The diatom slides of Albert Mann collected during the Philippine cruise of the USS Albatross were also observed at the National Museum of the Natural History (Smithsonian Institution) in Washington, D.C., U.S.A.; and some slides were also noted in the Academy of Natural Sciences in Philadelphia, U.S.A.

Included in the list are four new species and one new record (Table 1).

<table>
<thead>
<tr>
<th>Taxon</th>
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<th>Reference</th>
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<td><em>M. capax</em> Mann</td>
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<td><em>M. cebuensis</em> Mann</td>
<td>marine</td>
<td>Mann, 1925</td>
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<td><em>M. fusiformis</em> Mann</td>
<td>marine</td>
<td>Mann, 1925</td>
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**THE USE OF THE LIST**

The taxa under the genus *Mastogloia* are alphabetically arranged. The reference(s) that originally described the taxon is/are cited. This is followed by the reference(s) that had a Philippine entry or record, as in previous papers (Martinez-Goss 1995, 2001).

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Geographical distribution within the Philippines is listed in a north-to-south, east-to-west manner. Citation of location starts with the island, followed by the province, then the town or municipality. Specific habitats after each locality are given parenthetically and are followed by specific literature citations. However, entries without any specific location were cited first. Such is the case in Mann’s treatise on marine diatoms of the Philippines (1925), where he did not cite the specific location of the specimens collected by the USS Albatross. However, according to T. Bagarinao, Fulbright Fellow, pers. comm., the USS Albatross expedition to the Philippines was well-documented, although this might indeed be true of aquatic animals, some terrestrial plants and animals; and dredgings that had hydrographic data.

Unidentified specimens are lumped together as one group under the genus and are not considered in the enumeration of entries.

There was no attempt to verify the taxa, but the taxonomic treatment of Van Landingham (1971) is usually followed especially in correcting some entries, in updating valid binomials, and in making a common taxonomic entry. Some of the reasons for using Van Landingham’s catalogue are its worldwide coverage and comprehensiveness. However, all species names were finally based, where applicable, on the database in http://www.algaebase.org. Although, the latter has fewer entries (136 taxa in Mastogloia) compared to Van Landingham’s catalogue (280 species).

A taxon that is followed by an asterisk (*) indicates that it is not recognized by Van Landingham (1971) as a valid taxon. A double asterisk (**) means that the taxon is not found in Van Landingham (1971).

THE LIST


achnanthioides Mann
Mann, 1925, p. 87, 18/7.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. Type. Cat. No. 43633 United States National Museum of Natural History (USNM). Mann, 1925, p 87, 18/7.

acutiuscula Grun. var. elliptica Hust.
Hustedt, 1933, p. 516, f.947 c-d.


var. lanceolata Ricard**

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface sand brown with algae, exposed at low tide. (Sample 27). Podzorski and Hakansson, 1987, p.66, 24/6-7.

var. vairensis Ricard**

LUZON: Palawan, Taytay, marine samples; surface scraping from sand at low tide (Sample 2); Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p.66-67, 24/8-9.

amphipleuroidea Voigt
Voigt, 1942, p. 5, f. 40.

=amygdata Leud.-Fortm.*
(Note: In this case, this is the synonym according to Van Landingham (1971) but Podzorski and Hakansson (1987) used this name.)

LUZON: Palawan, Pto. Princesa, marine samples; algae growing on flat limestone rocks, exposed at low tide (Sample 21); from shallow bay affected by silt from flooding rivers during heavy rains; algae encrusted on Enhalus leaves close to the shore (Sample 22). Podzorski and Hakansson, 1987, p.67, 24/5.

angulata Lewis
Lewis, 1861, p. 65, 2/4.

LUZON: Palawan, Taytay, marine samples; surface scraping from sand at low tide (Sample 2); marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p.70, 24/2-3.

VISAYAS: Cebu, British Museum Natural History (BMNH), Comber’s slide # 31899.

apiculata W. Smith
Smith, 1856, p. 65, 62/387.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15); from the lake, algae growing on floating grass roots (Sample 20). Podzorski and Hakansson, 1987, p.67, 25/1.
asperula Grun.
Grunow manuscript in Cleve 1892, p. 161, 23/12; Cleve, 1895, p. 146.

VISAYAS: Cebu (BMNH, Grove’s Collection), in Cleve, 1895, p. 146.
Cebu (BMNH, Comber’s Collection # 31896, 31899, 31900).

biapiculata Hust.
Hustedt, 1933, p.513, f.943.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from the lagoon, surface sand brown with algae exposed at low tide (Sample 28). Podzorski and Hakansson, 1987, p. 72, 28/5.

binotata (Grun.) Cleve
Cleve, 1895, p. 148 (Orthoneis); Hustedt, 1933, p. 470, f. 889.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 72, 26/6; 53/4.

capax Mann
Mann, 1925, p. 87, 19/1.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. Type. Cat. No. 43634 United States National Museum of Natural History (USNM). Mann, 1925, p. 87, 19/1.

BMNH Collection of Adam’s TS 523/1.

cebuensis Mann
Mann, 1925, p. 88, 19/2.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p.88, 19/2. (No Catalog number)

BMNH Collection of Adam’s J2291, TS 60/82.

= M. lemniscata Cleve
sensu Cleve 1895, p. 159, 2/26 (non Leud.-Fortm., 1879)

(Note: M. lemniscata is synonymized despite the fact that it was a name given earlier (1895) than M. cebuensis (1925) based on Van Landingham’s (1971) assessment.)

LUZON: Manila, BMNH (Deby’s collection).

citrus (Cleve) de Toni
de Toni, 1891, p. 320; Cleve, 1893 in Schmidt, et al., 1874, 187/16-19.


cocconeiformis Grun.


LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p.68, 26/4.

constricta Cleve
Cleve, 1892, p. 159, 23/5.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; algae encrusted on Enhalus leaves close to the shore (Sample 22). Podzorski and Hakansson, 1987, p.72, 28/7.

corsicana Grun.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p.73, 29/2.

craveni (Leud.-Fortm.) Cleve
Cleve in Cleve et Grove, 1891, p.66, 10/5.

BMNH in Adam’s - Bess collection # 712 in Cleve et Grove, 1891, pp. 66, 10/5.

VISAYAS: Cebu in BMNH Comber’s collection # 31892.

cribrosa Grun.
Grunow, 1860, p.577, 7/10c (non 7/10 a, b, d).

= Orthoneis cribrosa Grun.

LUZON: Manila, BMNH, Comber’s collection # 31904; Comber’s 30924 on sponge.

cruciata (Leud.-Fortm.) Cleve
Cleve, 1891, p. 65, 10/4.

LUZON: Manila, BMNH, Deby’s collection; Comber’s collection # 31903, 33423 on shell; Adam’s General collection # 1711; TS 497.1/12. 522, 3/4-6.

VISAYAS: Cebu, BMNH # 31897; Comber’s collection # 31899.

var. ?

BMNH, Adam’s collection TS 497 1/11.

crucicula (Grun.) Cleve
Cleve, 1895, p. 148 (Orthoneis) (Stictoneis)

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; coral scraping from a cay (Sample 17). Podzorski and Hakansson, 1987, p. 68, 25/5.

decussata Grun.
Grunow manuscript in Cleve 1892, p. 182, 23/17.

VISAYAS: Cebu, BMNH, Comber’s collection # 31988-31901.

depressa Hust.
Hustedt, 1933, p.554, f.986.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 73-74, 29/3.

elegans Lewis
Lewis, 1865, p. 17, 2/16 (1/9).

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. Type. Cat. No. 43635 United States National Museum of Natural History (USNM). Mann, 1925, p. 88.

erythraea Grun.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 70, 27/4-5, 7.

euxina Cleve

VISAYAS: Cebu, BMNH, Comber’s slide # 31900.

fimbriata (Brightw.) Cleve
Cleve, 1895, p.148 (Orthoneis) (Stictoneis)

No specific location: BMNH, Adam’s Bess collection # 1707/3.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 69, 26/2-3.

VISAYAS: Cebu, BMNH, Comber’s slide # 31899 entered under the name Orthoneis fimbriata Grun. (Note: According to Van Landingham (1971), Orthoneis fimbriata Grun. is the same as M. fimbriata (Brightw.) Cleve.)

fusiformis Mann
Mann. 1925, p. 88, 19/3.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. Type. Cat. No. 43635 United States National Museum of Natural History (USNM). Mann, 1925, p. 88, 19/3.

VISAYAS: Cebu, rare, found only in one dredging, BMNH, Adam’s slide collection # J 2273-4.

= Mastogloia sp.

BMNH, Grove’s collection, Schmidt, 1893 in A. Schmidt, et al., 1874, 187/36.

goessii (Cleve) Cleve

VISAYAS: Cebu, BMNH, Adam’s Bess 715, in Cleve, 1895, p. 155; Schmidt, et al., 1874, 188/23.

gomphonemoides Hust. var. cuneata Meister


gruendleri A. Schmidt
Schmidt, 1893, 188/26.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 89.

gorvathiana Grun.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 69, 27/1.

= Orthoneis horvathiana (horvathiana) Grun.
Grunow, 1868, p. 16.

LUZON: Manila, BMNH, Comber’s slide # 31903.

hustedti Meister
Meister, 1934 (1935), p. 93, f. 27.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 73, 29/1.

ignorata Hust.
Hustedt, 1933, p. 506, f. 932.

= imitatrix Mann*

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. Type Cat. No. 4366 United States National Museum of Natural History (USNM). Mann, 1925, p. 89, 19/4; Hustedt, 1933, p.572.

inaequalis Cleve
Cleve, 1895, p.150, 2/15.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 70, 28/1-2; 53/3.

javanica Cleve
Cleve, 1893, in A. Schmidt, et al., 1874, 188/38.


jelinecki (jelinekii, jelineckiana) Grun.
Grunow, 1868, p. 99, 1/11.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 90.

BMNH, Adam’s F40 4/33; Bess 712; J4051.

LUZON: Manila, marine; BMNH, Deby’s collection, Cleve, 1895, p. 160; Comber’s # 33423 on shell.


jelineckii var. marina (Janisch et Rabenh.) Cleve
Cleve, 1895, p. 160, 2/18.

Marine, BMNH, Grove’s collection.
LUZON: Manila, marine, Deby’s collection.

labuensis Cleve

Marine, Cleve, 1895, p. 157, 2/5.

VISAYAS: Cebu, BMNH, Grove’s collection # 185/4, 187/2; Comber’s collection # 31892, 31900.

var. lanceolata Hust.
Hustedt, 1933, p. 518, f.580c.

VISAYAS: Cebu, BMNH, Comber’s collection # 31892, in Hustedt, 1933, p. 518, f. 580c.

lancettula Cleve
Cleve, 1892, p. 163, 23/18.

VISAYAS: Cebu, marine, in A. Schmidt et al., 1874, 188/24; BMNH, Comber’s collection # 31892, 31895, 31901.

lemniscata Leud.-Fortm.

= egregia A. Schmidt in A. Schmidt et al. 1874, 186/14.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 90.

BMNH, Adam’s collection # J2243-4; G211; F119.5/9;

leudugeri Cleve et Grove
Cleve et Grove, 1891, p. 65, 10/3.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 90.

BMNH, Adam’s TS 522 3/2; 523/10; TS 60/67.
LUZON: Manila, BMNH, Comber’s # 31903  
In: A. Schmidt, et al., 1874, 186/13;  
Hustedt, 1933, p. 548.

**lineata** Cleve et Grove  
Cleve et Grove, 1891, p.59, 9/11.  
Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 90.

BMNH, Adam’s J4051; TS 523/6; TS 60/50.  
LUZON: Manila, BMNH, Deby’s collection.

VISAYAS: Cebu, Comber’s collection # 31892, 31901.  
In: A. Schmidt, et al., 1874, 188/37 – Cebu (Grove’s collection); Hustedt, 1933, p. 538, f. 971.

**macdonaldii** Grev.  
Marine, in Cleve, 1895, p. 158, 2/21;  
BMNH, Adam’s J4051, G211.

LUZON: Palawan, Taytay, marine samples; surface scraping from sand at low tide (Sample 2).  

VISAYAS: Cebu, BMNH, Grove’s collection  
In: A. Schmidt, et al., 1874, 187/42 (Cebu), 43; Comber’s collection # 31892, 31895, 31899, 31900, 31902.

**mauritiana** Brun  
Brun, 1893, in A. Schmidt et al., 1874, 186/28.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; algae encrusted on *Enhalus* leaves close to the shore (Sample 22).  

**mauritiana** Brun var. *capitata* Voigt  
Voigt, 1942, p. 14, f. 35.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; algae encrusted on *Enhalus* leaves close to the shore (Sample 22).  

**minuta** Grev.  


Cebu, BMNH, Comber’s # 31902  
In: A. Schmidt, et al., 1874, 187/21;  
187/22 (Cebu), short and long.

**obesa** Cleve  
Cleve, 1893, p.15, 1/16.

VISAYAS: Cebu, BMNH, Comber’s # 31900.

**oculiformis** Brun  
Brun, 1893 in Schmidt et al., 1874, 187/39.  
Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 90.

**ovalis** A. Schmidt  
Schmidt, 1893, 185/30; Hustedt, 1933, 474/893.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15).  
Podzorski and Hakansson, 1987, p. 69, 27/10-11.

**ovata** Grun.  
Grunow, 1860, p. 578, 7/12.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 90.

LUZON: Palawan, Taytay, marine samples; surface scraping from sand at low tide (Sample 2);  
Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; coral scraping from a cay (Sample 17), Podzorski and Hakansson, 1987, p. 69, 26/8

= Orthoneis *ovata* (Grun.) Grun.  
Grunow, 1868, p. 98; Hustedt, 1933, p. 476, f. 895. BMNH, Adam’s J2272

**ovulum** Hust.  
Hustedt, 1933, p. 474, f.892.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; coral scraping from a cay (Sample 17).  

**ovum-paschale** (A. Schmidt) Mann  
Mann, 1925, p. 90.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States


BMNH, Adam’s collection # GC2376.

*praecincta* Voigt**


*pulchella* Cleve


Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 91.

*pusilla* Grun. var. *subcapitata* Hust.

Hustedt, 1933, p.569, f.1002 e, f.


*quinquecostata* Grun.


Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 91.


BMNH, Adam’s TS 497, 3/8.

LUZON: Manila, on shell, BMNH, Comber’s # 33423.

VISAYAS: Cebu, BMNH, Comber’s # 31898-31901.

= *quinquecostata* var. *elongata* Leud.-Fortm.) Cleve

Cleve, 1895, p. 161.

VISAYAS: Cebu, BMNH, Comber’s # 31898, 31899.

*recta* Hust.

Hustedt, 1942, p. 42, f. 54-58.

LUZON: Palawan, Taytay, marine samples; surface scraping from sand at low tide (Sample 2). Podzorski and Hakansson, 1987, p. 68, 25/6-7.

*rhombica* Cleve


LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 74, 29/4.


*rhombus* (Petit) Cleve *et* Grove

Cleve *et* Grove, 1891, p.58, 9/12.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.


VISAYAS: Cebu, BMNH, Comber’s collection # 31899, 31900.

*robusta* Hust.

Hustedt, 1933, p.518, f.951.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 68, 26/1.

*rostrata* (Wallich) Hust.

Hustedt, 1933, p. 572, f.1007.


*sansibarica* A. Schmidt*

Schmidt, 1893, 187/44.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.

VISAYAS: Cebu, BMNH, Comber’s # 31898-31901.


BMNH, Adam’s TS 497, 3/8.

LUZON: Manila, on shell, BMNH, Comber’s # 33423.

VISAYAS: Cebu, BMNH, Comber’s # 31898-31901.

= *quinquecostata* var. *elongata* Leud.-Fortm.) Cleve

Cleve, 1895, p. 161.

VISAYAS: Cebu, BMNH, Comber’s # 31898, 31899.

*seriata* Hust.

Hustedt, 1933, p.569, f.1002 e, f.


*rostrata* (Wallich) Hust.

Hustedt, 1933, p. 572, f.1007.


*sansibarica* A. Schmidt*

Schmidt, 1893, 187/44.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.

VISAYAS: Cebu, BMNH, Comber’s # 31898-31901.


BMNH, Adam’s TS 497, 3/8.

LUZON: Manila, on shell, BMNH, Comber’s # 33423.

VISAYAS: Cebu, BMNH, Comber’s # 31898-31901.

= *quinquecostata* var. *elongata* Leud.-Fortm.) Cleve

Cleve, 1895, p. 161.

VISAYAS: Cebu, BMNH, Comber’s # 31898, 31899.

*recta* Hust.

Hustedt, 1942, p. 42, f. 54-58.

LUZON: Palawan, Taytay, marine samples; surface scraping from sand at low tide (Sample 2). Podzorski and Hakansson, 1987, p. 68, 25/6-7.

*rhombica* Cleve


LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 74, 29/4.


*rhombus* (Petit) Cleve *et* Grove

Cleve *et* Grove, 1891, p.58, 9/12.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.


VISAYAS: Cebu, BMNH, Comber’s collection # 31899, 31900.

*robusta* Hust.

Hustedt, 1933, p.518, f.951.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 68, 26/1.

*rostrata* (Wallich) Hust.

Hustedt, 1933, p. 572, f.1007.


*sansibarica* A. Schmidt*

Schmidt, 1893, 187/44.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.
**similis** Hust.
Hustedt, 1933, p. 522, f. 955.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface sand brown with algae, exposed at low tide (Sample 27). Podzorski and Hakansson, 1987, p. 72, 28/8.

**sinuata** A. Schmidt
Schmidt, 1893, 186/11.

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.

**smithii** Thw. ex W. Smith
Thwaites, 1848; W. Smith 1856, p. 65, 54/341.

LUZON: Batangas, Matabungkay (epiphytic on Sargassum sp.) Quezon, Plaridel, Tumagay Beach (epiphytic on Sargassum sp.), Martinez-Goss et al., 2008.

A new record for the Philippines (Martinez-Goss et al., 2008.)

**splendida** (Greg.) Cleve et Moller

Bottom marine samples taken near the islands by the United States Steamer (USS) Albatross. United States National Museum of Natural History (USNM). Mann, 1925, p. 92.

BMNH, Adam’s Bess # 1707/2; TS 60/59.

LUZON: Palawan, Taytay, marine samples; algae encrusted seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 69-70, 26/7.

= **Orthoneis splendida** (Greg.) Grun.
BMNH, Adam’s Bess # 1707/2; F 45.6/66; TS497/17.

VISAYAS: Cebu, BMNH, Comber’s # 31900 in A. Schmidt, et al., 1874, 188/19.

**strigilis** Hust.
Hustedt, 1933, p. 541, f. 974.

LUZON: Palawan, Pto. Princesa, rapidly deepening zone; sand surface scraping (Sample 13). Podzorski and Hakansson, 1987, p. 73, 26/5

**subaffirmata** Hust.
Hustedt, 1927 in A. Schmidt et al., 1874, 368/13; Hustedt, 1933, p. 526, f. 960 a-f.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 74, 29/5

**sulcata** Cleve
Cleve, 1892, p. 162, 23/14.

Marine, BMNH, Grove’s collection, in Cleve, 1895, p. 147.


VISAYAS: Cebu, BMNH, Comber’s collection # 31892, 31895, 31899, 31900; Grove’s collection in A. Schmidt, et al., 1874, 187/51; Hustedt, 1933, p. 549, f. 979.

**tenuis** Hust.
Hustedt, 1933, p. 570, f. 1004.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface looked sand-brown with algae, exposed at low tide. (Sample 27). Podzorski and Hakansson, 1987, p. 71-72, 27/13-14.

**testudinea** Voigt

= **thaitiana** Cstr.
VISAYAS: Cebu, Comber’s collection # 31895, 31900

**tenuis** Hust.
Hustedt, 1933, p. 570, f. 1004.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface looked sand-brown with algae, exposed at low tide. (Sample 27). Podzorski and Hakansson, 1987, p. 71-72, 27/13-14.

**testudinea** Voigt

= **thaitiana** Cstr.
VISAYAS: Cebu, Comber’s collection # 31895, 31900

**tenuis** Hust.
Hustedt, 1933, p. 570, f. 1004.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface looked sand-brown with algae, exposed at low tide. (Sample 27). Podzorski and Hakansson, 1987, p. 71-72, 27/13-14.

**testudinea** Voigt

= **thaitiana** Cstr.
VISAYAS: Cebu, Comber’s collection # 31895, 31900

**squamosa** Brun
Brun, 1893, in A. Schmidt, et al., 1874, 188/19 (31).

= **affirmata** (Leud.-Fortm.) Cleve


BMNH, Adam’s # J2242, GC1704, J4051, In: A. Schmidt, et al., 1874, 188/19 (31).

**strigilis** Hust.
Hustedt, 1933, p. 541, f. 974.

LUZON: Palawan, Pto. Princesa, rapidly deepening zone; sand surface scraping (Sample 13). Podzorski and Hakansson, 1987, p. 73, 26/5

**subaffirmata** Hust.
Hustedt, 1927 in A. Schmidt et al., 1874, 368/13; Hustedt, 1933, p. 526, f. 960 a-f.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p. 74, 29/5

**sulcata** Cleve
Cleve, 1892, p. 162, 23/14.

Marine, BMNH, Grove’s collection, in Cleve, 1895, p. 147.


VISAYAS: Cebu, BMNH, Comber’s collection # 31892, 31895, 31899, 31900; Grove’s collection in A. Schmidt, et al., 1874, 187/51; Hustedt, 1933, p. 549, f. 979.

**tenuis** Hust.
Hustedt, 1933, p. 570, f. 1004.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface looked sand-brown with algae, exposed at low tide. (Sample 27). Podzorski and Hakansson, 1987, p. 71-72, 27/13-14.

**testudinea** Voigt

= **thaitiana** Cstr.
VISAYAS: Cebu, Comber’s collection # 31895, 31900

**tenuis** Hust.
Hustedt, 1933, p. 570, f. 1004.

LUZON: Palawan, Pto. Princesa, from shallow bay affected by silt from flooding rivers during heavy rains; from lagoon, surface looked sand-brown with algae, exposed at low tide. (Sample 27). Podzorski and Hakansson, 1987, p. 71-72, 27/13-14.

**testudinea** Voigt

= **thaitiana** Cstr.
VISAYAS: Cebu, Comber’s collection # 31895, 31900
undulata Grun.
Grunow, 1860, p. 576, 7(5)/5.

LUZON: Palawan, Taytay, marine samples; algae encrusted on seaweed from cove (Sample 15). Podzorski and Hakansson, 1987, p74, 29/6-7, 9-10; 52/6; 53/1-2

sp.

BMNH, Adam’s Bess 1708/1 1715; G211 (new species), F119. 1/7; F120 1/2; TS60/84.


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