

New Species of the Tintinnida found from the Inland Sea

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(with 3 textfigs.)

瀬戸内海から見出した有鐘纖毛虫類の新種

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In the collections of the microplankton chiefly taken from Hiroshima Bay in the Inland Sea since 1958, have been detected the following 25 species of the Ciliata carrying a lorica, including 3 forms new to science. These consist of many neritic and a few cosmopolitan species, and most of them are warm water forms to the exclusion of cold water elements. First of all, in them three new species have been only described in the present short report.

List of the Tintinnida detected from Hiroshima Bay

Subphylum Ciliophora

Class Ciliata

Subclass Spirotricha

Order Tintinnida

Family Tintinnididae

1. *Tintinnidium mucicolum* (CLAP. & LACH.)
2. *Leprotintinnus simplex* SCHMIDT
3. *L. nordqvist* (BRANDT)

Family Codonellidae

4. *Tintinnopsis nana* LOHMANN
5. *T. glans* MEUNIER
6. *T. lohmanni* LAACKMANN
7. *T. directa* HADA
8. *T. angustior* JØRGENSEN
9. *T. tubulosa* LEVANDER
10. *T. cochleata* (BRANDT)
11. *T. uruguayensis* BALECH
12. *T. baltica* BRANDT
13. *T. tocantinensis* KOFOID & CAMPBELL
14. *T. bütschlii* DADAY
15. *T. radix* (IMHOFF)
16. *T. kofoidi* HADA
17. *T. pseudocylindrica* n. sp.
18. *T. corniger* n. sp.

Family Codonellopsidae

19. *Stenosemella nivalis* (MEUNIER)
 20. *Codonellopsis limosa* HADA
 21. *C. nipponica* n. sp.
 Family Coxiellidae
 22. *Helicostomella longa* (BRANDT)
 Family Cyttarocyliidae
 23. *Favella ehrenbergi* (CLAP. & LACH.)
 24. *F. azorica* (CLEVE)
 Family Tintinnidae
 25. *Tintinnus lusus-undae* ENTZ

***Tintinnopsis pseudocylindrica* n. sp.**

Fig. 1.

Lorica cylindrical in the main part with a few faint spiral figures, slightly inflated in the posterior region, then gradually conical to the end which is not usually pointed due to a distal opening irregular in shape and position; surface rather coarse. Length, 125–216 μ ; oral diameter, 35–37 μ .

The new form has been rarely observed in materials obtained from Hiroshima Bay in summer. It closely resembles to *T. cylindrica* DAADY of European waters in outline of a lorica, but apparently differs from the latter in having an aboral opening, and is also allied to the species carrying a cylindrical lorica with an aboral opening, such as *T. kofoidi* HADA and *T. radix* (IMHOF) occurring with it in Hiroshima Bay. It is secured from them in contour of the posterior region of a lorica.

Subgenus *Paratintinnopsis* n. subgen.

The lorica of the forms of the Genus *Tintinnopsis* is composed of an inner chitinous layer and agglomerated particles attached closely to the former, and the structure of the basal layer is not apparently observed exteriorly in the typical ones. However, the form reported in the paper has a lorica consisting of a main part made of the usual structure of *Tintinnopsis* and of an aboral horn of the basal chitinous layer having a fine reticulation on the surface without agglomerated particles. Now, the author has separated the group of species of *Tintinnopsis* carrying a lorica consisting of the wall different originally from the typical forms and advanced to establish the new Subgenus *Paratintinnopsis* for it.

***Tintinnopsis (Paratintinnopsis) corniger* n. sp.**

Fig. 2.

Lorica consisting of a cylindrical main part with agglomerated particles and

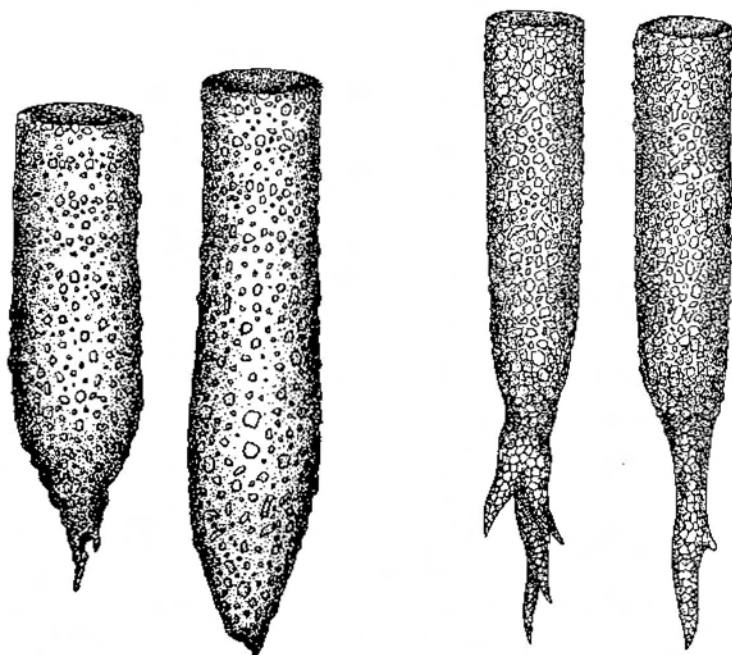


Fig. 1. *Tintinnopsis pseudocylindrica*
n. sp. $\times 400$.

Fig. 2. *Tintinnopsis (Paratintinnopsis) corniger*
n. s p. $\times 400$.

a branched aboral horn without foreign particles as an antler having 1-4 branches; surface rather coarse without a spiral figure in the main part, but in the aboral horn fine reticulation appearing. Length, 150-225 μ ; length of an aboral horn, 37-65 μ ; oral diameter 28-33 μ .

The new form is apparently different from the all of the species of *Tintinnopsis* in having a branched horn characteristic in structure. The remarkable species has been rarely found in the materials taken from Hiroshima Bay during June-October and from Matoya Bay in Mie Ken in August of 1959. The oyster-culture has been carried out in these bays, therefore, in which salinities of seawater are rather low. From this fact it seems that the species is fond of a sea of low salinities.

In the lorica of the new form the border between the walls different in constructure is clearly observed, but is not the true one in those of *Tintinnopsis*, even in loricae composed of scarce agglomerated particles, such as in that of *T. cochleata* (BRANIYI).

***Codonellopsis nipponica* n. sp.**

Fig. 3.

Lorica made of a wide collar and an ovate bowl; collar more or less inflated

in an aboral half, provided with 5-6 spiral turns without fenestration; bowl widest at a position a little above the middle, ending to a slight distal elevation rounded widely; surface roughened with coarse agglomerated particles. Total length, 125-150 μ ; length of a collar, 37-50 μ ; length of a bowl, 88-100 μ ; diameter of a bowl, 85-87 μ , oral diameter 57-62 μ .

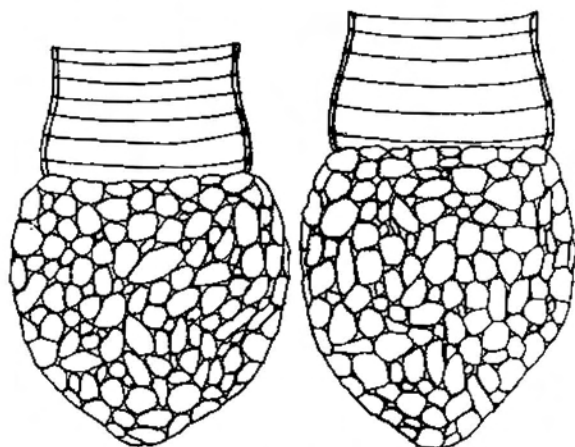


Fig. 3. *Codonellopsis nipponica* n. sp. $\times 400$.

The large new species has been collected from the seas off Tamashima City, Okayama Ken and near Itsuku-Shima, Hiroshima Ken. The former is the type locality of the new species.

The new one differs from the allied form, *C. morchella* (CLEVE) in having a stouter lorica and a wide collar without any fenestella and from *C. limosa* HADA occurring together with it in Hiroshima Bay in carrying a higher collar and in larger size of a lorica. Its lorica is largest among those of *Codonellopsis* secured from Japanese waters.

要 約

数年前より広島湾の動物性プランクトン中の原生動物について調査研究を行ない、有鐘纖毛虫25種を検出した。そのうちに3新種が含まれている。とりあえずこれらの新種について報告する。

Tintinnopsis pseudocylindrica n. sp.

Tintinnopsis (*Paratintinnopsis*) *corniger* n. subgen. & n. sp.

Codonellopsis nipponica n. sp.

Tintinnopsis 属の種の殻はキチン質の基質の表面に他物が固着していて、基質の構造は外部からは明瞭に認めがたいが *T. corniger* の殻では *Tintinnopsis* 構造の部分と表面の付着物のない鹿の角状の突起部とがはっきり区別されるので新亜属 *Paratintinnopsis* を創設した。