



Title	An additional note on dimorphism in <i>Chionaspis nyssae</i>
Author(s)	Takagi, Sadao
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der Rinde von *Pinus densiflora* aus Japan”].

Aspidiotus corticis-pini: Lindinger, Ztschr. f. Wiss. Insektenbiol. 7: 86, 1911 [“Japan: Yokohama, auf der Rinde der Zweige von *Pinus densiflora*”].

Unaspidotus corticis-pini: MacGillivray, The Coccidae: 387 and 405, 1921.

Japaspidotus cedricola Takagi and Kawai, Insecta Matsumurana 28: 118, 1966 [“Tokyo on *Cedrus deodara* and *Tsuga diversifolia*; Simazima, Nagano-ken, on *Pinus densiflora*”]. **Syn. nov.**

I have examined 5 slides of this species; 2 of them are labelled “Syntype/No. 118 Station für Pflanzenschutz/*Aspidiotus corticis-pini* Lindgr./*Pinus densiflora*, auf Rinde der Zweige/Japan, Yokohama/30. 1. 07. Lindgr.”, 2 others “*Aspidiotus corticis-pini*/*Pinus densiflora*, Rinde/Japan, 11. 5. 1909”, and the last “*Pinus densiflora*/Japan, Yokohama/14. IV. 1910”. One of the syntypes is here designated as the lectotype.

This species was originally described from material collected in Germany on *Pinus densiflora* imported from Japan, but has been neglected for a long time by Japanese authors. Examining the slides from Lindinger’s collection I have found that *Japaspidotus cedricola* is quite identical with *corticispini*. *Cedricola* has 2 forms in regards to the dorsal macroducts of the pygidium: in one of these forms the macroducts are arranged in 2 longitudinal rows on each side, whereas in the other a short additional row is found outside the usual rows. The specimens from Lindinger’s collection all belong to the former form.

Lindinger referred *corticispini* to the “subgenus” *Morganella*, to which, however it does not belong in reality. For the reception of this species MacGillivray erected *Unaspidotus*, which is here accepted as valid. *Japaspidotus* should be sunken as a synonym of *Unaspidotus* (**syn. nov.**).

AN ADDITIONAL NOTE ON DIMORPHISM IN *CHIONASPIS NYSSAE*

By SADAŌ TAKAGI

In the foregoing paper “The genera *Chionaspis* and *Pseudaulacaspis*, with a criticism on *Phenacaspis*” (pp. 29–43) it is asserted that *Phenacaspis nyssae* (Comstock, 1881) and *Chionaspis sylvatica* Sanders (1904) belong to the same species, the former being the form associated with the leaves of the host plant and the latter with the woody parts, and also that the genus *Phenacaspis* Cooley and Cockerell (1899), of which the type-species is *nyssae*, should be sunken as a synonym of *Chionaspis* (1869). These 2 forms differ remarkably not only in the median lobes but also in the dorsal macroducts. In the leaf-feeding form the median lobes are sunken in a distinct apical notch of the pygidium, elongate and divergent, and the 6th abdominal segment is provided with dorsal macroducts in both submedian and submarginal groups. In the bark-feeding form the median lobes are quite robust, produced beyond the apex of the pygidium and basally fused together, and the 6th abdominal segment is devoid of macroducts except for the occasional presence of a single submedian macroduct.

In the foregoing paper it is shown that these forms are connected by 2 intermediate specimens collected in Arkansas, but these specimens are intermediate only in the shape

of the median lobes, and in the character of dorsal macroducts they are identical with the bark-feeding form.

After the manuscript of the foregoing paper was put to press, I received from Dr. H. H. Tippins, Experiment Station of the College of Agriculture, University of Georgia, a slide containing 2 specimens of scale insects collected on the fruit of "Tupelo" (*Nyssa aquatica*) in Clinch Co., Georgia (16-X-1966, H. H. Tippins, #HHT-37-66). These specimens apparently belong to *Chionaspis nyssae*.

One of Dr. Tippin's specimens is almost typical of the leaf-feeding form, but by having slightly broader and shorter median lobes it is close to the specimens of this form collected with the intermediate specimens in Arkansas (Specimen No. 13 and 14 in Fig. 1, p. 34). It is provided on either side of the 6th abdominal segment with a submedian and a submarginal macroduct.

The other specimen is quite identical with one of the intermediate specimens collected in Arkansas (Specimen No. 11) in the shape of the median lobes. To great interest it has a submedian and a submarginal macroduct on one side of the 6th abdominal segment, while it has none on the other side of the segment. I am very much inclined to believe that this specimen may give a good evidence for the opinion that *nyssae* and *sylvatica* are forms of the same species.

Moreover, Dr. Tippins informed me that the presence of the submarginal group of macroducts on the 6th abdominal segment is not a constant particular of the leaf-feeding form. It may be better to cite main part of his letter, which reads as follows:

"Mr. G. W. Dekle of Gainesville, Florida recently showed me your letter with the figure of an intermediate form which unites *Chionaspis sylvatica* and *Phenacaspis nyssae*. I have suspected that these must surely be dimorphic forms of one species. I have examined quite a few specimens from the stem, leaf, petiole, and fruit of *Nyssa sylvatica*. In each case, all specimens from the stem and fruit were *Chionaspis* form and all from leaves and petioles were *Phenacaspis* form.

"I do have two specimens from the fruit of *Nyssa aquatica*, one of which is typical *Phenacaspis* form while the other seems close to the intermediate form shown in your figure....."

"I have also noticed after examining many slides of *P. nyssae* that the presence of two ducts representing the submarginal group of segment 6 is not constant and distinctive of the species as stated by Prof. Ferris. In fact, among my specimens, it is unusual for the two ducts to be present on both sides. Some specimens have no ducts in this position on either side and other have various arrangement of 1-0, 2-0, 2-1, etc....."

In conclusion, I wish to express my hearty thanks to Dr. Tippins for his kindness in giving me invaluable informations and in permitting to cite his letter in this paper. The slide sent from Dr. Tippins is deposited, with his agreement, in the collection of the Entomological Institute of the Hokkaido University.