The entity *Calimeris amplexifolia* Siebold & Zucc. (Compositae)

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Abstract. Since the work of Kitamura in 1936, *Calimeris amplexifolia* Siebold & Zucc. has been treated as conspecific with *Aster semiamplexicaulis* Makino, which is one of the members of the widely distributed, eastern Asian *Aster ageratoides* group. Reexamination of the original material of Siebold and Zuccarini proved that *Aster semiamplexicaulis* is actually a mixture of three other species, *Aster ageratoides* Turcz. var. *ageratoides*, *A. ovatus* (Franch. & Sav.) Mot. Ito & Soejima var. *ovatus* and *Solidago* sp. Based on the protologue and the epithet used by Siebold and Zuccarini, a lectotype specimen chosen has the leaf bases rounded and can be identified as *A. ageratoides* var. *ageratoides*. Therefore, it is concluded that *C. amplexifolia* is not a synonym of *A. semiamplexicaulis* but of *A. ageratoides* var. *ageratoides*.

Key words: *Aster ageratoides*, *Calimeris amplexifolia*, Compositae, lectotypification

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*Calimeris amplexifolia* Siebold & Zucc. has been considered to belong to *Aster ageratoides* group (Kitamura, 1936; Ito and Soejima, 1995) which is one of the Sino-Japanese elements widely distributed in China, Manchuria, Korea, Japan and Taiwan. This group of perennial herbs consists of many taxa, all usually with long stolons and lanceolate, oblong-lanceolate or ovate leaves with three distinct nerves, basal leaves withering at anthesis, few to many heads of 1.0–1.5 cm in diameter with white or blue-purple ray-florets and hemispherical involucres arranged in corymb or loose corymbose panicles. Many taxa in this group represent a polyploid series ranging from diploid to nonaploid, and are a source of taxonomic confusion (Soejima and Ito, 1987; Soejima, 1992, 1993). Kitamura (1981) recognized one species, nine subspecies and six varieties within Japanese *A. ageratoides* group. Hara (1952) recognized five species, two subspecies and 12 varieties. Ito and Soejima (1995) recognized seven species and seven varieties. All of these authors, however, treated *C. amplexifolia* as conspecific with *A. semiamplexicaulis* Makino.

*Aster semiamplexicaulis* is characterized by its tomentose-hirsute leaves and stems. However, several fragments of specimens of Siebold deposited in the Makino Herbarium (MAK), which may belong to the original material of *C. amplexifolia*, do not have long dense hairs but are minutely pubescent.

The purpose of this paper is to report on the identity of *Calimeris*
ampelisfolia Siebold & Zucc. based on a reexamination of the protologue and the original material.

Historical treatment of Calimeris ampelisfolia Siebold & Zucc.

*Calimeris ampelisfolia* was first described from Japanese plants by Siebold and Zuccarini in 1846. They provided a Latin description but cited no specimens. Miquel (1866) referred to *C. ampelisfolia* and cited three specimens collected by Buerger and/or Pierot in Japan. Later, Kitamura (1936) proposed a new combination, *Aster ageratoides* Turcz. subsp. *ampelisfolius* (Siebold & Zucc.) Kitamura in the revision of Japanese *Aster*, and he treated *A. semiamplexicaulis* Makino as a synonym of this subspecies. *Aster semiamplexicaulis* was a name first published by Makino (1892) without description (*nomen nudum*). In 1898, Makino made a new combination and changed its status to *Aster trinervius* Roxb. var. *semiamplexicaulis* Makino on the basis of plants from Japan. Koidzumi (1923) raised the taxon to species as *A. semiamplexicaulis* (Makino) Koidz.

Hara (1952) accepted Kitamura's concept that *A. semiamplexicaulis* and *C. ampelisfolia* were synonymous at the rank of species. Because there was an earlier North American *Aster ampelisfolia*, he adopted *A. semiamplexicaulis* as the correct name.

Original material of Calimeris ampelisfolia Siebold & Zucc. and its relationship to Aster semiamplexicaulis (Makino) Koidz.

The first publication mentioning a relationship between *Calimeris ampelisfolia* and *Aster semiamplexicaulis* was a revision of Japanese *Aster* written by Kitamura (1936). He treated both *C. ampelisfolia* and *A. semiamplexicaulis* as synonyms of *A. ageratoides* subsp. *ampelisfolius*, but it is not sure whether Kitamura examined the original material of Siebold and Zuccarini. Before Kitamura's revision was published, Koidzumi visited several herbaria in Europe in the late 1920s, and left a notebook in which he referred to the three flowering specimens of *C. ampelisfolia* collected in Japan as the types. These specimens, which he identified as *A. semiamplexicaulis*, are deposited in the herbarium of the Botanische Staatssammlung in München (M). It is therefore likely that Kitamura (1936, 1937) followed Koidzumi's interpretation of the original material as written in his notebook.

I have borrowed and examined two of the three specimens from München referred to in Koidzumi's notebook. According to Prof. Dr. Hertel, the curator, a third specimen could not be found. Another curator, Dr. Lippert suggested that one of them of the two specimens was assumed to be collected by Siebold (Figs. 1A, 2A). The other was collected by Bürger (Figs. 1B, 2B). Each sheet has a handwritten with "the type of Calimeris ampelisfolia S.Z." An identification label with "Aster semiamplexicaulis Makino" was added by Koidzumi to the Siebold specimen (Fig. 2A). Each sheet contains two plants. I have examined these specimens and found that they are a mixture of two species of *Aster*. The plant on the right side of the sheet of Bürger's collection and the two plants of the Siebold are *A. ageratoides* var. *ageratoides*; the plant on the
The left side of the Bürger sheet is *Aster ovatus* (Franch. & Sav.) Mot. Ito & Soejima var. *ovatus*.

*Aster semiamplexicaulis* is distinguished from *A. aegeratoides* mainly by leaf shape and hair density. *Aster semiamplexicaulis* usually has leaf bases truncate to somewhat amplexicaul in contrast to cuneate base of those in *A. aegeratoides*, but the range of variation in leaf shape overlaps and sometimes causes difficulties in identification. Hair density on leaves and stems is a more reliable key character to distinguish between them. *Aster semiamplexicaulis* has dense long hairs but *A. aegeratoides* is glabrous or with sparse short hairs (Soejima, 1993; Ito and Soejima, 1995). The leaf bases of the three plants (two of Siebold’s, and the right one of Bürger’s) are round to slightly truncate, rather than cuneate, which must have lead to the misidentification. They also have sparse, short hairs, and thus are *A. aegeratoides* var. *aegeratoides*.

I also had a chance to examine the three specimens Miquel (1866) cited as *Calimeris amplexifolia* Siebold & Zucc.; Bürger s.n. (2 sheets), *Pierrot* 127 (3 sheets), *Pierrot* 931 (1 sheet). They are now deposited in the Rijksherbarium in Leiden (L). Another specimen collected by Siebold is also here. All four of these specimens are *Aster aegeratoides* except for the two plants on the left of the Siebold s.n. specimen, which is *Solidago virgaurea* L. subsp. *asiatica* Kitam. ex H. Hara.

![Fig. 1. A: Specimen probably collected by Siebold (M, Lectotype), B: Specimen collected by Bürger (M)](image-url)
var. asiatica.
Within the set of Siebold specimens deposited in the Makino Herbarium (MAK), there are four fragments in a cover of Calimeris amplexifolia. One of the fragments is Aster ageratoides var. ageratoides, and the other three are Aster ovatus var. ovatus.

Other material of Siebold
In the Rijksherbarium, there are two other specimens of Aster ageratoides group collected by Siebold in Japan. They are a part of the original material used by Miquel (1866) to describe Amphilapis japonica. In 1846, Siebold described Calimeris amplexifolia, but since his description is not concordant with these specimens it seems that Siebold distinguished these plants from Calimeris amplexifolia. These plants have the leaf bases truncate to somewhat amplexicaul, dense long hairs on the stems and the leaves, and both specimens are identified as Aster semiamplexicaulis. Kitamura (1936, 1937), Hara (1952), and Ito and Soejima (1995) consider Amphirapis japonica and Aster semiamplexicaulis to be conspecific.

Lectotypification of Calimeris amplexifolia
Siebold and Zuccarini (1846) did not cite specimens when they described Calimeris amplexifolia. Thus, a lectotype must be selected from the original material (ICBN 9.2.).
Three species are included within the original material. Solidago virgaurea L. subsp. asiatica has yellow rays and long petioles and does not fit the protologue. Two different plants, Aster ageratoides var. ageratoides and Aster ovatus var. ovatus, are mounted together on the Bürger's specimen at L, and these two species are also in the cover of C. amplexifolia in the Siebold collection at MAK. One of these two should be selected as the type specimen of C. amplexifolia of Siebold and Zuccarini. These two species resemble each other but rather easily
SOEJIMA: *Calimeris amplexifolia*

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**References**


副島顕子: **Calimeris amplxifolia** Siebold & Zucc. の正体

キク科シオン属のシロヨメナ群は種類が多く、しばしば分類学上の混乱を招いてきた。そのためこの群ではシノニムリストが複雑である。**Calimeris amplxifolia** は日本で採集された標本にもとづいて Siebold & Zuccarini が1846年に記載した種であるが、1936年北村によってイナガキギ Aster semiamplexicaulis と同種とされて以来、そのシノニムとされてきた。しかし、シーボルトらが採集に用いたと考えられるライデン、ミュンヘンおよび牧野標本館の標本を調査した結果、これらの標本にはシオン属であるシロヨメナ、ノコンギクのほか、別属のアキノキリンソウの3種が含まれていることが明らかになった。このうち、原記載の **C. amplxifolia** にもっともよく対応するのは葉の基部がやや丸みを帯び、葉の下面にまばらな短毛がある標本である。これはシロヨメナと同定できるもので、シーボルトが採集したものと思われる。以上のことから、**Calimeris amplxifolia** はシロヨメナと同種で、**Aster ageratoides** Turcz. var. *ageratoides* のシノニムであると結論する。また、原記載にはタイプの指定がされていないので、ここで改めて Siebold s.n. (M) を **Calimeris amplxifolia** Siebold & Zucc. のレクトタイプに指定する。

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