

## Lectotypification of *Cetraria kurokawae* Shibuichi & K. Yoshida

Yoshihito Ohmura<sup>1,\*</sup>, Koza Yoshida<sup>2</sup> and Hiroyuki Kashiwadani<sup>1</sup>

<sup>1</sup>Department of Botany, National Museum of Nature and Science,  
Amakubo 4–1–1, Tsukuba, Ibaraki 305–0005, Japan

<sup>2</sup>Saitama Museum of Natural History, Nagatoro, Chichibu-gun, Saitama 369–1305, Japan

\*E-mail: ohmura-y@kahaku.go.jp

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**Abstract** A lectotype is selected for *Cetraria kurokawae* from the paratypes since the holotype is missing from the herbarium of the Department of Botany, National Museum of Nature and Science (TNS) for a long time.

**Key words**: lichenized Ascomycota, *Nephromopsis*, nomenclature, Parmeliaceae, taxonomy, typification, *Usnocetraria*.

*Cetraria kurokawae* Shibuichi & K. Yoshida was originally described based on specimens collected from Chichibu Mountains in Saitama Prefecture and Omogo Gorge in Ehime Prefecture in Japan (Shibuichi and Yoshida, 1982). This species is currently treated as *Usnocetraria kurokawae* (Shibuichi & K. Yoshida) M.J.Lai & J.C.Wei (Parmeliaceae, lichenized Ascomycota), an endemic and rare lichen species in Japan. It is characterized by the yellowish green thallus with isidia (Fig. 1) and the presence of usnic, alectronic, fumarprotocetraric, and succinprotocetraric acids as the major chemical substances (Shibuichi and Yoshida, 1982; Lai *et al.*, 2007).

A specimen collected on bark of *Chamaecyparis obtusa* in Mt. Mitsumine, Chichibu-gun, Prov. Musashi, Honshu, Japan (S. Kurokawa 64315) was designated as holotype. However, the holotype specimen is missing from the herbarium packet for long years in the herbarium of National Museum of Nature and Science (TNS). Therefore, we designate a lectotype for *C. kurokawae* according to ICN Art. 9.2 (Melbourne Code). It has been selected from the paratype specimens that coincide in morphology and chemistry with the protologue (cf. ICN Art. 9.12).

***Usnocetraria kurokawae*** (Shibuichi & K. Yoshida) M.J.Lai & J.C.Wei, J. Natl. Taiwan Mus. 60: 59, 2007.

*Cetraria kurokawae* Shibuichi & K. Yoshida, J. Jpn. Bot. 57: 296, 1982. – *Nephromopsis kurokawae* (Shibuichi & K. Yoshida) Kurok., J. Jpn. Bot. 66: 156, 1991.

LECTOTYPE (designated here; Fig. 1): Japan. Honshu. Prov. Musashi (Pref. Saitama): Ohbora River, So-goya Valley, Chichibu-gun, on trunks of *Pinus pentaphylla*, ca.1050m alt., 21 April 1978, K. Yoshida 3097 (TNS).

Specimens examined. JAPAN. Honshu. Prov. Musashi (Pref. Saitama): Ohbora River, So-goya Valley, Chichibu-gun, on rocks (chert), ca. 1050m alt., 21 April 1978, K. Yoshida 3096 (TNS); the same locality, on trunks of *Chamaecyparis obtusa*, K. Yoshida 3098 (TNS); Sogoya-dani Valley, Ohtaki-mura, Chichibu-gun, on dead tree, ca. 1240m alt., 11 December 1995, H. Shibuichi 9730 (TNS); Mt. Myoho-dake, Mitsumine Mts., Ohtaki-mura, Chichibu-gun, on trunk of *Chamaecyparis obtusa*, ca. 1350m alt., 12 December 1995, H. Shibuichi 9741 (TNS). Shikoku. Prov. Iyo (Pref. Ehime): Omogo Gorge, Kamiukena-gun, on trunk of *Sciadopitys verticillata*, ca. 800m alt., 26 August 1981, H. Shibuichi

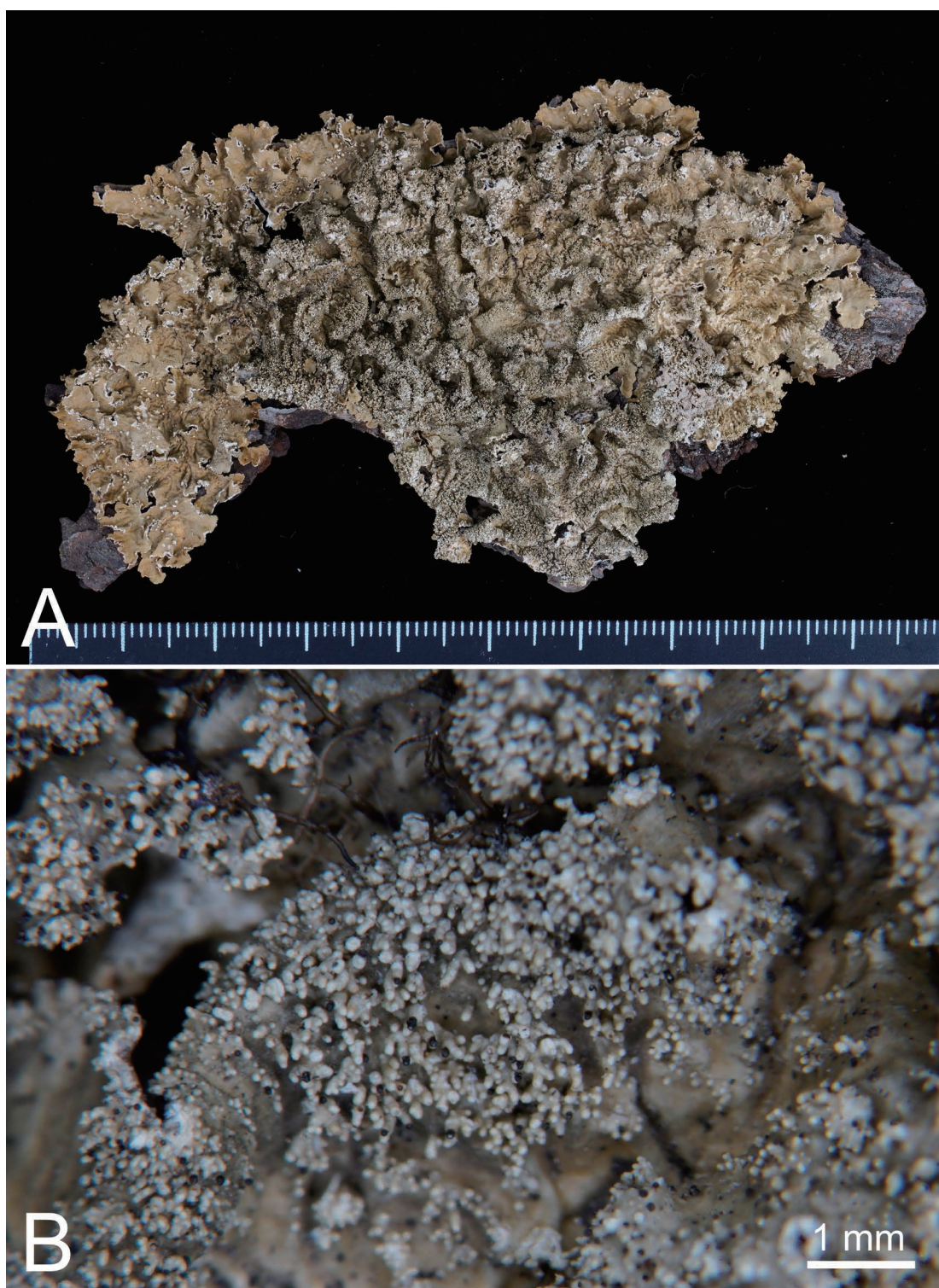


Fig. 1. Lectotype of *Cetraria kurokawae* Shibuichi & K. Yoshida (K. Yoshida 3097, TNS). A. Thallus. B. Isidia.

6856 and 6877 (TNS); Omogo Gorge, Wakayama, Kumakohgen-cho, Kami-Ukena-gun, on bark of *Sciadopitys verticillata*, ca. 780m alt., 24 March 2011, H. Kashiwadani 49155 (TNS).

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### References

- Shibuichi, H. and Yoshida, K. 1982. A new species of *Cetraria* (Parmeliaceae) found in Japan. *Journal of Japanese Botany* 57: 296–298.
- Lai, M. J., Qian, Z. G. and Xu, L. 2007. Synopsis of the cetrarioid lichen genera and species (Parmeliaceae, lichenized Ascomycotina) in China. *Journal of the National Taiwan Museum* 60: 45–62.