

Short Communication

A new variety of *Cortinarius elatior* from Japan

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Cortinarius elatior var. *albipes* var. nov., found in the deciduous forest is described and illustrated. It is distinguished from the type variety by having a white stipe and longer spores. The differences between *Cortinarius elatior* var. *albipes* and similar taxa are briefly discussed.

Key Words—*Cortinarius elatior* var. *albipes*; *Cortinarius* Sect. *Defibulati*; new variety; taxonomy.

The genus *Cortinarius* is an agaric group of more than 600 species (Singer, 1986) that is distributed worldwide. About 60 species of *Cortinarius* have been reported from Japan (Hongo, 1987), some of which have not been found since they were first recorded in Japan and seem to be incorrectly identified. To clarify the *Cortinarius* flora of Japan, the author has been surveying these species for the past 13 years.

In this paper, a new variety of *Cortinarius elatior* (Sect. *Defibulati*) in the subgenus *Myxacium* of *Cortinarius* is reported from Niigata Prefecture.

Color designations in parentheses in the species description follow Kornerup and Wanscher (1978).

Cortinarius elatior Fr., Epicr. Mycol. p. 274. 1838. var. *albipes* Miyauchi, var. nov. Figs. 1–3

Pileo 60–100 mm lato, primo conico vel campanulato, dein umbonato-explanato, margine infracto, viscido, radiatim rugoloso-sulcato, brunneo vel ochraceo-brunneo; lamellis confertis, emarginato-adnatis, ventricosis, 7–9 mm latis, primo argillaceis, dein pallide brunneis; stipe 80–120 longo, 20 mm crasso, cylindraceo, ad basim attenuato-radicato, ventricoso, viscido, albido, supra cortinam striato; carne albida vel leviter cremea vel pallide

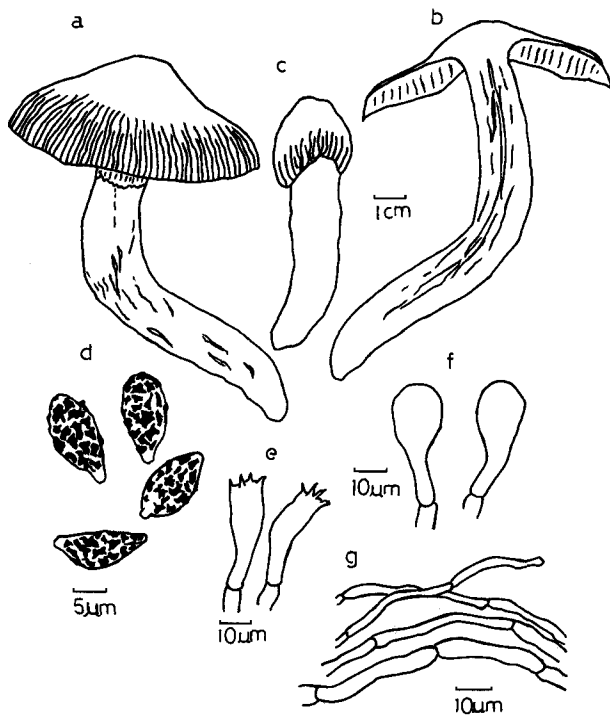


Fig. 1. *Cortinarius elatior* var. *albipes* (Holotype TNS-F-100240).

a. Mature basidiocarp, b. Immature basidiocarp, c. Cross section of basidiocarp, d. Spores, e. Basidia, f. Cheilocystidia, g. Pileus surface hyphae.

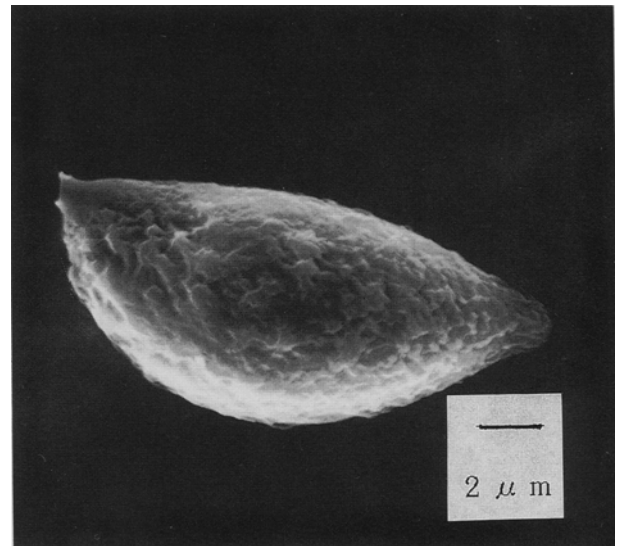


Fig. 2. *Cortinarius elatior* var. *albipes* (Isotype SM9810161N). Spore (SEM photograph).

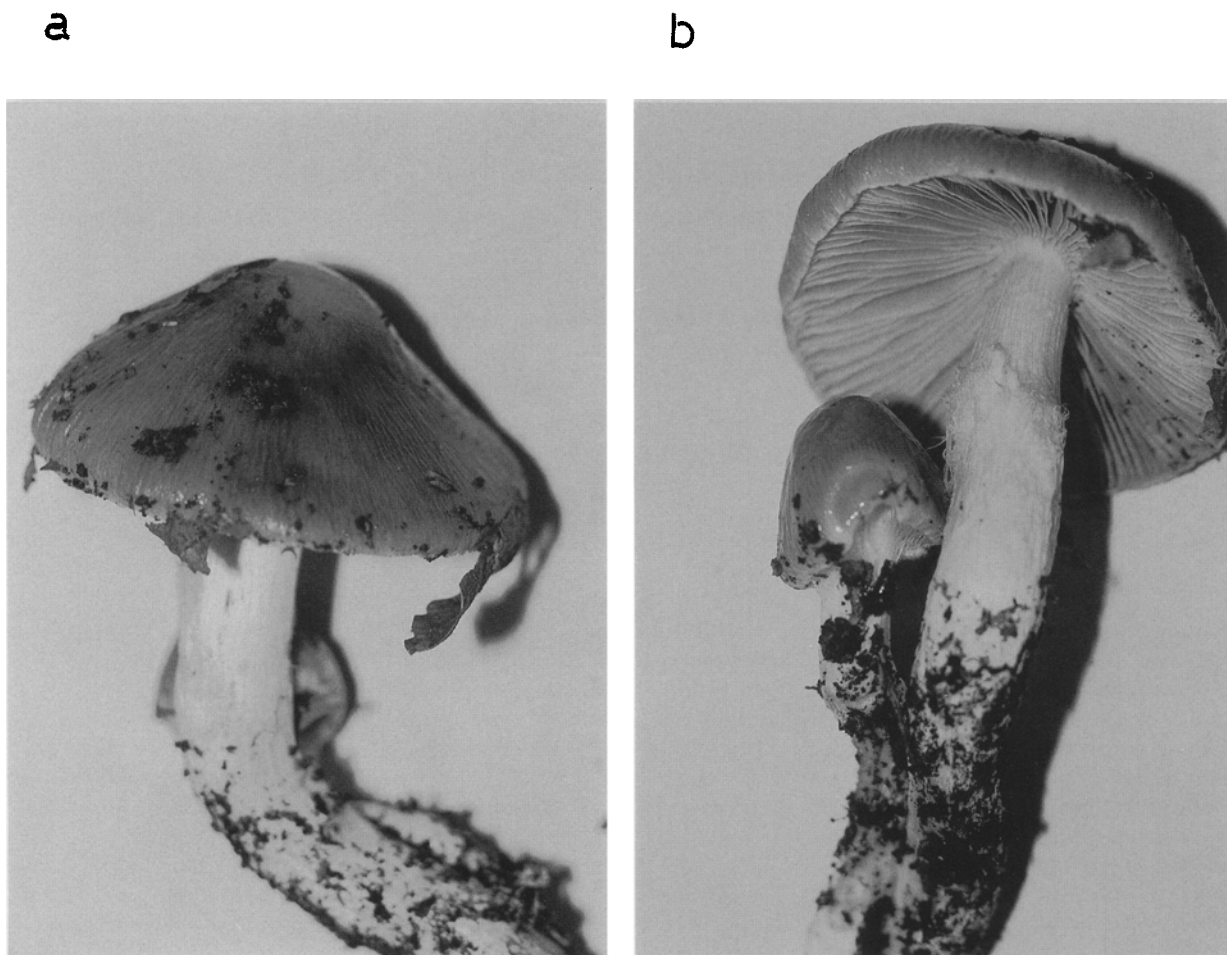


Fig. 3. *Cortinarius elatior* var. *albipes* (Holotype TNS-F-100240).

a. Mature basidiocarp showing the pileus with radially wrinkled striations, b. Immature and mature basidiocarps showing cortinate stipe and gills.

brunneola; sapore miti; odore leviter farinaceo; basidiosporis fuscoideis vel anguste limoniformibus, $14.3\text{--}16.0 \times 6.8\text{--}7.5 \mu\text{m}$, asperatis; basidiis 4-sporigeris, $30\text{--}35 \times 8\text{--}10 \mu\text{m}$; cheilocystidiis bursiformibus, $30\text{--}38 \times 12\text{--}18 \mu\text{m}$.

Holotypus: Matsunoyama, Matsunoyama-cho, Niigata Pref. 16 Oct. 1998, H. Takizawa leg., in Herbario TNS conservatus (no. TNS-F-100240).

Etymology: *albipes* means white-footed.

Pileus 60–100 mm in diam, conical or campanulate when young, becoming expanded, broadly umbonate, with an abruptly incurved margin, viscid, shiny, radially wrinkled-sulcate, brown (7D7–7E6) to ochraceous brown (6C8–6D8), sometimes dark brown (6F8), becoming paler from the center on drying. Lamellae fairly crowded, with many lamellulae, adnate to emarginate, ventricose, 7–9 mm wide, at first whitish to argillaceous, later becoming brownish or clayish with white edge, transversely venose. Stipe 80–120 \times 20 mm, cylindrical with a subradicating base or fusiform, viscid, covered with whitish veil, longitudinally furrowed above the cortina zone, totally whitish, in places marked with diffracted

scales from veil. Context whitish, somewhat soft, slightly creamy or somewhat brownish, slightly discoloring to brownish with 5% KOH. Taste mild, smell slightly farinose. Spores fusiform to long, lemon-shaped, $14.3\text{--}16.0 \times 6.8\text{--}7.5 \mu\text{m}$, quotient of the length and width 1.9–2.2, coarsely warted (Figs. 1d; 2). Basidia $30\text{--}35 \times 8\text{--}10 \mu\text{m}$, four-sterigmate without clamps (Fig. 1e). Cheilocystidia broadly clavate $30\text{--}38 \times 12\text{--}18 \mu\text{m}$ (Fig. 1f). Pleuro- and caulocystidia absent. Cuticular hyphae of the pileus surface tubular, with element cells, $2.0\text{--}6.0 \times 25\text{--}50 \mu\text{m}$, without clamps (Fig. 1g).

Habitat: solitary to gregarious on the ground in deciduous forests, in particular with *Quercus serrata*, *Quercus mongolica* var. *grosseserrata* and/or *Fagus japonica*.

Holotype: Matsunoyama, Matsunoyama-machi, Niigata Pref., in *F. japonica* forest, 16 Oct. 1998, collected by H. Takizawa [TNS-F-100240, preserved in herbarium of National Science Museum, Tsukuba]; Isotype in Miyauchi private herbarium as SM9810161N.

Other specimens examined: Shitada, Sanjyo-shi, Niigata Pref. in deciduous forest (*Q. serrata*, *Q. mongo-*

lica var. *grosseserrata* etc.), 12 Oct. 1986, col. by S. Miyauchi (S. M.); Happodai, Nagaoka-shi, Niigata Pref. in deciduous forest (*Q. serrata*, *Q. mongolica* var. *grosseserrata*, etc.), 14 Oct. 1989, col. by S. M.; Suyama, Matsuno-yama-machi, Niigata Pref. in deciduous forest (*F. japonica*, *Q. mongolica* var. *grosseserrata*, etc.), 30 Sept. 1990, col. by S. M.; Tainai, Kurokawamura, Niigata Pref. in deciduous forest (*F. japonica*, *Q. mongolica* var. *grosseserrata*, etc.), 29 Sept. 1994, col. by S. M.; Kakumanji, Kawanishi-machi, Niigata Pref. in deciduous forest (*F. japonica*, *Q. mongolica* var. *grosseserrata*, etc.), 30 Oct. 1998, col. by S. M.

This *Cortinarius* is considered to belong to section *Defibulati* Moser in the subgenus *Myxacium* (Fr.) Loud. (Fries, 1838; Moser, 1969; Singer, 1986), since it has a viscid pileus and stipe, large, verrucose lemon-shaped spores, hyphae lacking clamp connections, and broadly clavate cheilocystidia. *C. elatior* var. *albipes* closely resembles the type variety (Fries, 1838; Lange, 1935; Michael, Hennig and Kreisel, 1981; Marchand, 1983; Moser, 1983; Dahncke, 1993; Marklund and Melot, 1994). However, the former is different from the latter in its white stipe and longer spores (length/width ratio larger than 1.9). *Cortinarius pangloius* Moser (Moser, 1969, 1983) is similar to *C. elatior* and has a white stipe, but differs in its smaller spores ($10.5\text{--}13 \times 6.5\text{--}8 \mu\text{m}$) and in the comparatively shallow wrinkles of the pileus. *Cortinarius elatior* Fr. sensu Kawamura (Kawamura, 1929) may be identical with *C. elatior* var. *albipes*, because it has a white stipe and elongated spores of $12\text{--}14 \times 6 \mu\text{m}$.

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