

## A new species of *Cristinia* (Aphylophorales, Corticiaceae) from North Italy

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**Abstract.** — *Cristinia artheniensis*, sp. n., is described from Friuli, North Italy. The distinctive features are the hyphae without clamp connections, basidia with cyanophilous granulation and thickwalled spores. A key and comments are presented to the known species of *Cristinia*.

### Description

***Cristinia artheniensis*** BAICI & HJORTSTAM, sp. n. — Fig. 1.

Basidioma resupinatum, laxe adhaerens, flavo-ochraceum vel roseo-ochroleucum, nonnusquam helvolum. Hymenium farinoso-floccosum, vel hypochnoideo-grandinioideum, margine indistincto. Systema hyphale monomitium, totis hyphis efibulatis. Hyphae subhymeniales tenuitunicatae, dense intertextae, copiose ramosae, 3–4  $\mu\text{m}$  latae, cellulis brevibus cum septis 10 ad 30  $\mu\text{m}$  intervallatis. Hyphae subiculi paulae, rectae, distinctae, laxe intertextae, tenuitunicatae, 4–5  $\mu\text{m}$  latae, cum septis latius intervallatis (50–90  $\mu\text{m}$ ). Basidia subclavata vel subcylindracea, nonnumquam in media parte leviter constricta, 15–25  $\times$  5–6  $\mu\text{m}$ , cum sterigmatibus 4 subconicis, leviter arcuatis, usque ad 5  $\mu\text{m}$  longis. Protoplasma basidiorum cum guttulis oleosis, admodum cyanophilis. Cystidia desunt. Basidiosporae subglobosae, obovatae vel late ellipsoideae, nonnumquam leviter angulatae, laeves, incrassate tunicatae, non amyloideae neque dextrinoideae, cyanophilae, 3–5  $\times$  3–4  $\mu\text{m}$ . Habitatio ad corticem ramusculi arboris frondosae, ligno putrido; Arthenea, Regio Forum Julii, Italia, 28. VII. 1980, legit A. BAICI. Holotypus in herbario Universitatis Oslo (O), isotypus in herbario Polytechnicae Universitatis Turicensis (ZT).

**Etymology:** from the type locality, Artegna (which original latin name was Arthenea), Province of Udine, North Italy.

**Fr u i t b o d y** resupinate, effused, farinose-floccose in the young parts, hypochnoid-grandinioid in the older parts, loosely attached to the substratum and of soft consistency, pale ochraceous or yellowish-ochraceous at the periphery (no. 200 of the color code of SÉCŪY, 1936, corresponding to SACCARDO's no. 29 = flavo-ochraceous), more deeply ochraceous to reddish-ochraceous in older parts (no. 250 of SÉCŪY's

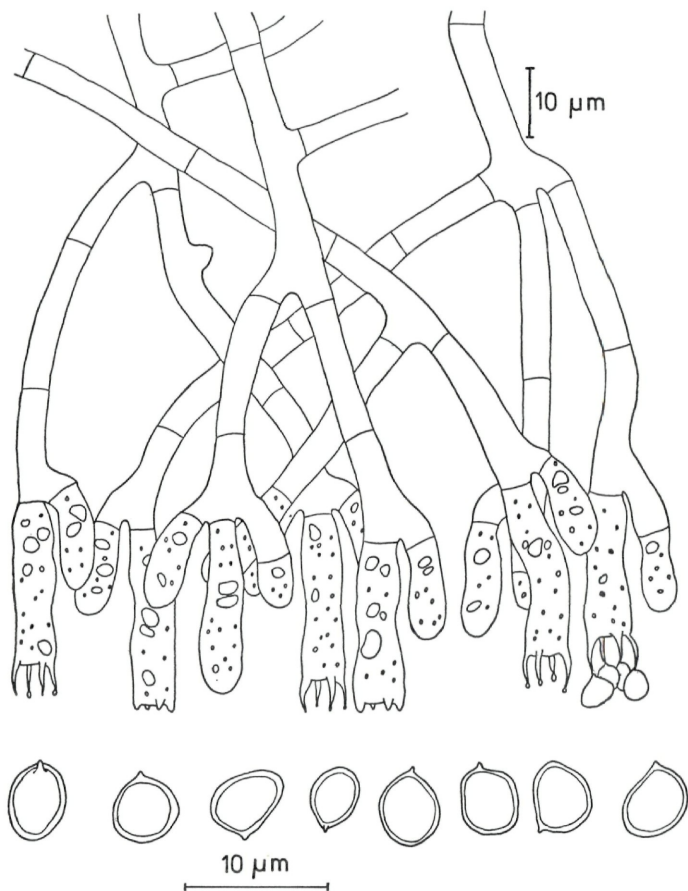


Fig. 1. *Cristinia artheniensis* BAICI & HJORTST. (type). Hymenium and spores.

scale corresponding to SACCARDI'S no. 28 = roseo-ochroleucus, helvolus) — Hymenium floccose, granular; margin indeterminate.

Hyphal system monomitic, all hyphae with simple septa, organized in a very soft and lax tissue. Subhymenial hyphae thin-walled, 3—4 µm wide, richly branched and interwoven, mostly short-celled

with septa occurring at 10—30  $\mu\text{m}$  intervals. — *Subiculum* scarcely developed with basal hyphae 4—5  $\mu\text{m}$  in diameter, thin-walled, rather straight. loosely interwoven and with sparse ramifications, more long-celled than the subhymenial ones (septata at 50—90  $\mu\text{m}$  intervals).

*Cystidia* absent. — *Basidia* subclavate to subcylindrical, sometimes with a central constriction, 15—25  $\times$  5—6  $\mu\text{m}$ , bearing normally 4 sterigmata, which are about 5  $\mu\text{m}$  long and slightly curved. Oildrops present in the basidial protoplasm, which are stained deeply blue in Cotton blue. — *Spores* subglobose, obovate or broadly ellipsoid, mostly of irregular shape and to some extent angular, thick-walled, smooth, cyanophilous, not amyloid nor dextrinoid, 3—5  $\times$  3—4  $\mu\text{m}$ .

*Habitat*. — On the bark of an angiosperm's twig with much decomposed wood. — *Distribution*. — Hitherto known only from the type locality.

### Keys and comments to the species of *Cristinia* and two other taxa

Both *Corticium filium* BRES. and *Cristella subhelvetica* PARM. differ from all species in *Cristinia*: the former by its dextrinoid spores and the latter by its thin-walled, acyanophilous spores. However, these species are included here because of their superficial similarities. — It should also be mentioned that the holotype of *Cristinia sasae* PARM. has been studied (U.R.S.S., Kunashir, 5. X. 1960, leg. PARMASSTO, 13020, Tartu, isotypus GB). This specimen represents a young, relatively smooth *Cristinia helvetica* (PERS.) PARM.

- |   |                                  |
|---|----------------------------------|
| 1. Hyphae without clamps .....              | 2                                |
| 1*. Hyphae with clamps .....                | 3                                |
| 2. Spores thick-walled, cyanophilous .....  | 1. <i>C. artheniensis</i>        |
| 2*. Spores thin-walled, acyanophilous ..... | 6. <i>Cristella subhelvetica</i> |
| 3. Spores dextrinoid .....                  | 2. <i>Corticium filium</i>       |
| 3*. Spores indextrinoid .....               | 4                                |
| 4. <i>Cystidia</i> present .....            | 5. <i>C. sonorae</i>             |
| 4*. <i>Cystidia</i> absent .....            | 5                                |
| 5. Hymenium raduloid to irpicoid .....      | 3. <i>C. gallica</i>             |
| 5*. Hymenium granulose .....                | 4. <i>C. helvetica</i>           |

#### 1. *Cristinia artheniensis* BAICI & HJORTSTAM

This species has all the typical characteristics of the other members of *Cristinia*, viz. the grandinoid to colliculose hymenium, the thick-walled, cyanophilous spores, short-celled hyphae and basidia with cyanophilous granulation. It is similar to *C. helvetica* (PERS.) PARM., from which it differs particularly in the clampless hyphae. The presence or absence of clamp connections is not taken as a discriminating criterion at the generic level. Thus, in spite of the introduction of the

simple-septate element into *Cristinia* with *C. artheniensis*, it remains a very homogeneous genus.

2. *Corticium filium* (BRES.) LIBERTA, Taxon 15: 318. 1966.

≡ *Trechispora filia* (BRES., Ann. Mycol. 6: 43. 1908.

≡ *Cristinia filia* (BRES.) LIBERTA, Can. J. Bot. 51: 1891. 1973.

This species differs from members of *Cristinia* mainly by its dextrinoid spores.

3. *Cristinia gallica* (PILÁT) JÜLICH, Persoonia 8: 298. 1975.

≡ *Radulum gallicum* PILÁT, Mykologia 2: 54. 1925.

Illustrations and descriptions of this species can be found in ERIKSSON & RYVARDEN (1975) p. 311 under the name *Cristinia mucida*, and remarks to this epithet in JÜLICH (1975: l. c.).

4. *Cristinia helvetica* (PERS.) PARM., Consp. Syst. Cort., p. 48. 1968.

≡ *Hydnum helveticum* PERS., Mycol. Eur. 2: 184. 1825.

Illustrations and descriptions can be found in ERIKSSON & RYVARDEN (1975: 307). This is the type species of *Cristinia* PARM.

5. *Cristinia sonorae* NAKASONE & GILBERTSON, Mycologia 70: 271. 1978.

These authors report a good description, illustrations and cultural characters. With its thick-walled, cyanophilous spores and short-celled hyphae, this North American species fits well into the concept of *Cristinia*.

6. *Cristella subhelvetica* PARM., Eesti NSV Tead. Akad. Toim. Biol. Seer. 14: 223. 1965.

≡ *Trechispora subhelvetica* (PARM.) LIBERTA, Taxon 15: 319. 1966.

In his revision of the genus LIBERTA (1973) excluded this species. Due to its thin-walled, acyanophilous spores and short-celled hyphae. however, it is included here. Illustrations and descriptions are given in PARMASO (1965: l. c.).

### Literature

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