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Cyrtomium falcatum, new to the Italian flora

Abstract

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The occurrence of a *Cyrtomium falcatum* population naturalized in the southern Po Valley (Emilia-Romagna region, Italy), is reported. This is the first record of the species for Italy, since all previous Italian findings of *Cyrtomium* belong to *C. fortunei*.

The genus *Cyrtomium* C. Presl (*Aspidiaceae*) comprises about 20 species distributed mainly in the tropical and subtropical zones of Africa, America and Asia, in damp rocky habitats. Some authors include this genus in *Polystichum* on the basis of similarities in the morphology of the pinna and of the shield-shaped indusium.

Cyrtomium falcatum (L. fil.) C. Presl is native to E. Asia and is cultivated as an ornamental plant in Europe. Jalas & Suominen (1972), under the synonym *Polystichum falcatum* (L. fil.) Diels, report its being naturalized in Portugal and Great Britain, without giving further details of its European distribution. Badré & Deschatres (1979) include it among the French fern species as an alien naturalized near Nice.

Specimens of *Cyrtomium* found in S. Switzerland near Brissago (Kramer in E. Pignatti & al) and in N. Italy (near Cannobio, in Lombardy, and on Mount Ragogna, in the Friuli Pre-Alps) all to *C. fortunei* J. Sm. (S. Pignatti 1982; E. Pignatti & al. 1983), although the last-named one had at first been referred to as "*C. falcatum*" (Poldini 1980).

The *Cyrtomium* population found by us grows on an old brick-walled well on a privately owned farm (P. Tartarini, via Barchetta 58), 500 m SE of the hamlet of Bisana (municipality of Galliera, province of Bologna, Emilia-Romagna region, N. Italy), in the southern Po Valley. The locality lies at about 44° 5' N and 11° 5' E, and 15 m a.s.l. (Fig. 1), in quadrant 1234/1 of the grid of the computer mapped Atlas of the Emilia-Romagna Flora, which is the same as is used for the Atlas of the Flora of Central Europe. (Ferrari & al. 1993).

We found this fern on 4 April 1992, but its presence was known to the farm owner since 1987. The population grows on the inside of the well wall in numerous clumps, down to a depth of approximately 1.5 m, with individuals of all ages. Some are luxuriant, so as to almost close the well shaft. Other vascular plant growing on the well wall, are *Asplenium trichomanes* L., *Dryopteris filix-mas* (L.) Schott, *Linaria cymbalaria* L., *Oxalis corniculata* L., *Stellaria media* (L.) Vill., and *Urtica dioica* L.. Mosses and lichens occur as well.

The *Cyrtomium* specimens of this population are larger than those of *Cyrtomium fortunei* described by S. Pignatti (1982). The fronds (Fig. 2) are pinnate, coriaceous, dark

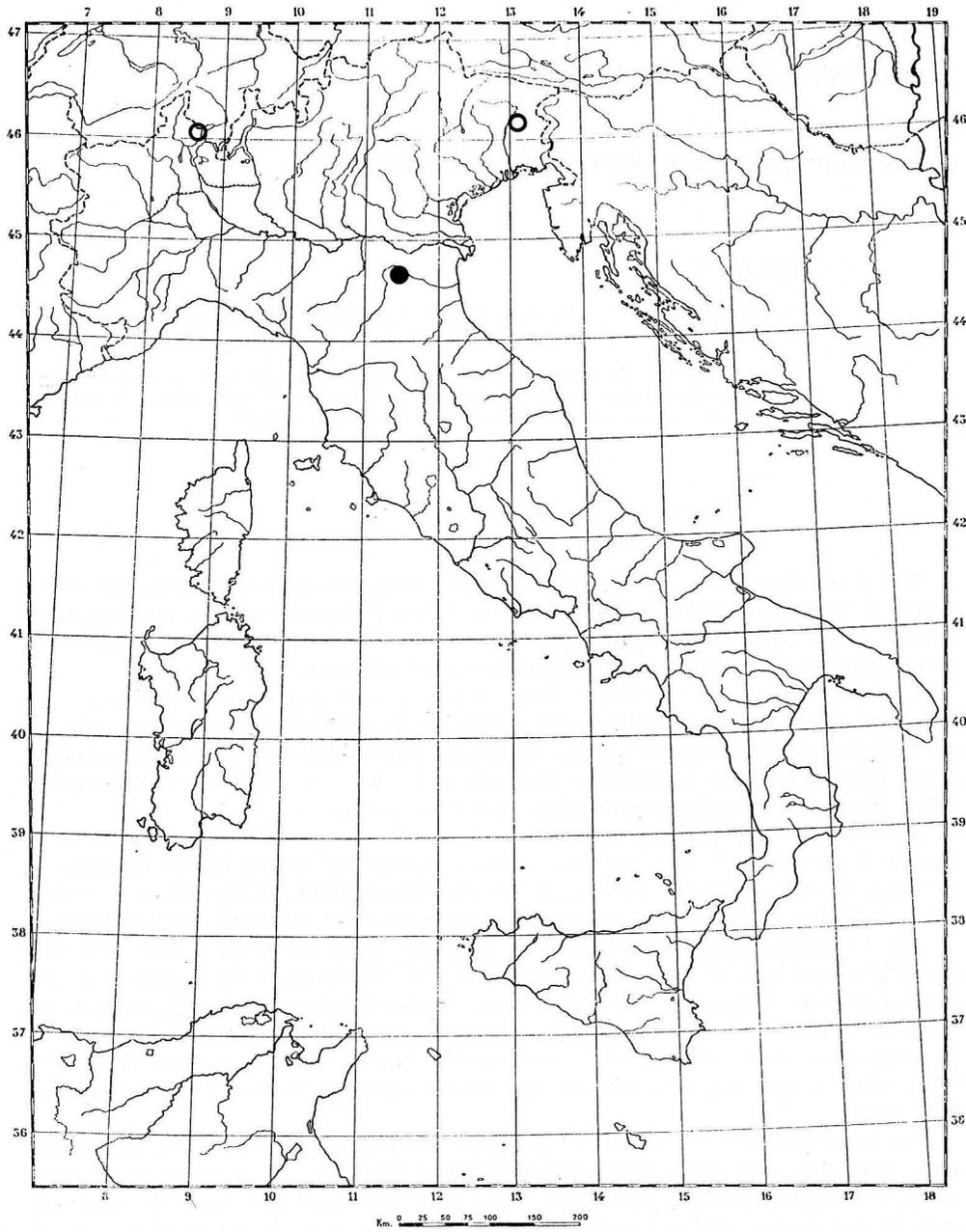


Fig. 1. Map of the known Italian localities of *Cyrtomium falcatum* (●) and of *Cyrtomium fortunei* (○).

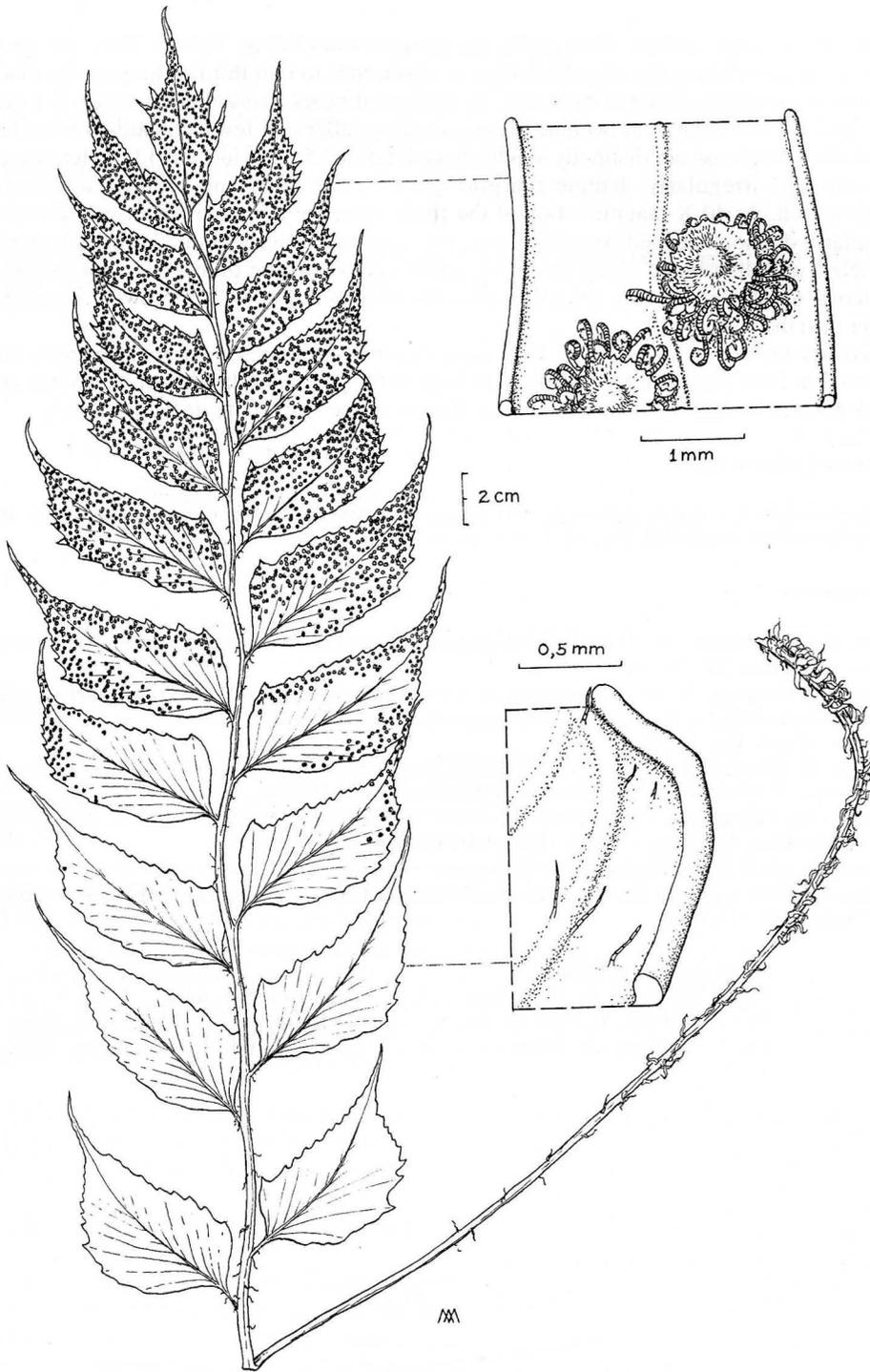


Fig. 2. *Cyrtomium falcatum* from Bisana (N Italy). Drawing from a herbarium specimen (PAV) by Anne Maury (Florence).

green on the upper surface when adult, the younger ones being lighter. They are up to 110 cm long, including the stipe. The stipe is about half to two third as long as the blade and has a maximum diameter of 8 mm. At its base it bears rust-coloured scales 2-3 mm wide and 7-8 mm long, that become progressively smaller and fewer towards the base of the blade. The pinnae are distinctly sickle-shaped, up to 2.5 cm wide and 13 cm long, with coarsely and irregularly dentate margins (teeth 1-2.5 mm) and without additional denticulation. At 40 X magnification at the frond apex the pinnae often fuse to form an irregularly diamond-shaped terminal pinna. The sori are numerous, small (about 1 mm in diameter) and distributed along the entire lower surface of the pinnae. The indusium is caducous, shield-shaped and, initially, markedly two-coloured, with a brown central part darker than the edge.

To our knowledge, this is the first naturalized occurrence of *Cyrtomium falcatum* observed in Italy. Herbarium specimens are kept in the private herbarium of Bonafede and in the general herbarium of the Institute of Botany of the University of Pavia (PAV).

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