

## *Kabatia valpellinensis* reported from Switzerland <sup>1)</sup>

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### Abstract

The combination *Kabatia valpellinensis* (= *Marsonia valpellinensis*) is proposed based on a recent collection from Switzerland. A revised description and illustrations are provided along with a short review of the genus *Kabatia*.

Die Kombination *Kabatia valpellinensis* (= *Marsonia valpellinensis*) wird auf Grund einer neuerlichen Sammlung aus der Schweiz vorgeschlagen. Eine Überarbeitung der Beschreibung und der Illustrationen werden zusammen mit einem Überblick der Gattung *Kabatia* festgesetzt.

### Introduction

During the excursion in the region of Davos, Switzerland, which preceeded the First International Mycological Congress, a number of unusual fungi were collected. One of these was found on leaves of *Salix reticulata* and identified as *Marsonia valpellinensis* Trav.

From TRAVERSO's description it is quite apparent that this is the same fungus. Upon making a detailed study of this recent collection, it was observed that the conidia were formed in distinct pycnidia typical of *Kabatia* BUBÁK rather than under a shield-like structure as in *Marsonia* FISCH. This genus is treated under the Melanconiaceae by CLEMENTS and SHEAR (1931) while they place *Kabatia* in the Leptostromataceae.

Originally *Kabatia* BUBÁK (BUBÁK and KABÁT, 1904) was erected for *K. latemarensis* BUBÁK (= *K. lonicerae* (HARK.) HÖHN.) while *K. mirabilis* BUBÁK was added a year later (BUBÁK and KABÁT, 1905); both organisms are found on species of *Lonicera*. CONNERS (1959) in studying the members of *Leptothyrium* KUNZE ex WALLR. and *Kabatia* on species of *Lonicera* erected several additional varieties of these taxa. Although showing only small morphological differences, there appear to be physiological differences as well since each of these

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varieties appears to have a particular host preference. Besides the species on *Lonicera*, only three other species of *Kabatia* have been described. These are *K. silenes* LOBIK (1928) on *Silene venosa*, *K. fragariae* SOLHEIM (1949) on *Fragaria ovalis*, and *K. cucubali* BUKHALO (1961) on *Cucubalus baccifer*.

MÜLLER (1953) was able to show experimentally that *K. loniceræ* is the conidial state of *Guignardia latemarensis* MÜLLER, although CONNERS (1959) has questioned the conclusiveness of these results. Subsequently, MÜLLER (1957) published a detailed study of the conidial states of various species of *Guignardia* VIALA et RAVAZ. The only connection reported by MÜLLER involving *Kabatia* is that with *G. latemarensis* and there is no mention of a *Guignardia* on *Salix*. This could be a conceivable connection for *Marsonia valpellenensis* although MÜLLER (pers. comm.) has confirmed that he is not aware of a species of *Guignardia* on *Salix*. Nevertheless, as species of *Guignardia* typically fruit in the early spring and hence are rarely collected (MÜLLER, pers. comm.), it is still conceivable that a species of *Guignardia* might be found which would connect with *M. valpellenensis*.

Originally TRAVERSO (1912) described *M. valpellenensis* from "Valle d'Aosta" in northern Italy. This locality is generally across the border to the west of the region where the present material was collected. To the best of my knowledge, this fungus has not been reported since the original collection and has not been previously known from Switzerland.

Since the necessary combination in *Kabatia* has not been proposed previously, this is given here along with a revised description of the fungus.

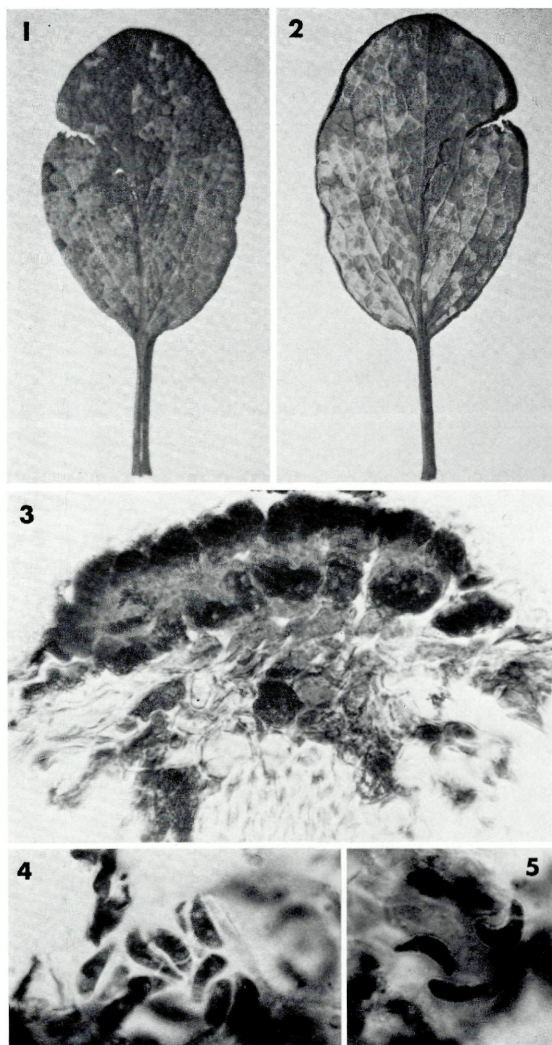
### Taxonomy

*Kabatia valpellenensis* (TRAV.) KRUG comb. nov.

Figs. 1—5

= *Marsonia valpellenensis* Trav., Bull. Soc. Flore Valdôtaine 8: 31 extr. 1912.

Spots numerous, superficial, yellowish brown to somewhat dark purplish brown by reflected light, occurring predominantly on the upper leaf surface, initially scattered, minute, slightly discolouring the surrounding leaf tissue, becoming subcircular, finally confluent and irregular. Pycnidia hypophyllous, frequently epiphyllous as well, circular in outline, situated predominantly along the leaf ribs, surrounded by yellowish brown discoloured leaf tissue, usually occurring singly, strongly protruding, erumpent, dimidiate-scutate, black, 200—300  $\mu$  diameter, composed in surface view of angular, thick-walled, yellow-brown cells measuring about 6.5—10  $\mu$  diameter. Conidiophores rather indistinct, hyaline. Conidia two-celled,



Figs. 1–5. *Kabatia valpellinensis*. Fig. 1. Gross view of the upper leaf surface showing the confluent spots.  $\times 1.5$ . Fig. 2. Gross view of the lower leaf surface  $\times 1.5$ . Fig. 3. Vertical section through an immature sporocarp and associated host tissue.  $\times 370$ . Figs. 4–5. Conidia with several showing the septum.  $\times 900$ .



unequally septate, hyaline, somewhat cuneate to falcate, narrowed towards one end, 11–14.5 (–16) × 4–5.5 (–6)  $\mu$ .

Habitat: on leaves of *Salix reticulata* in the high Alps.

Specimen examined: Switzerland: Kt. Graubünden: Sertig, leaves of *Salix reticulata*, 2 Sept. 1971, Cain, TRTC 47105 (TRTC, ZT).

This fungus characteristically forms conspicuous purplish brown spots with the pycnidia forming along the ribs on the upper leaf surface. The taxon differs from the other known species of *Kabatia* in its known distribution, host preference and size of the conidia.

I would like to thank Professor R. F. CAIN (Toronto) and Professor E. MÜLLER (Zürich) for their helpful comments. Mr. P. PILLEY (Lindsay) originally suggested the possible relationship with *Kabatia* and to him. I wish to express my appreciation. Mr. R. S. JENG (Toronto) has assisted with the preparation of the illustrations for which I extend my thanks.

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