



## NEW FERNS (*FILICOPSIDA*) IN THE FLORA OF THE MASSIF OF THE BOKOVO MT. (DALMATIA, CROATIA)

ČEDOMIL ŠILIĆ & MARIJA EDITA ŠOLIĆ

The Mountain and Sea Institute, Franjevački put 1, 21300 Makarska, Croatia

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This work presents new items in the flora of the ferns (*Filicopsida*) on the Biokovo massif that have not been observed on this mountain previously. The following species are concerned: *Asplenium fissum* Kit. ex Willd., *Polypodium cambricum* L., *Cheilanthes acrostica* (Balbis) Tod. and *Pteridium aquilinum* (L.) Kuhn.

**Key words:** *Filicopsida*, *Asplenium fissum*, *Polypodium cambricum*, *Cheilanthes acrostica*, *Pteridium aquilinum*.

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U radu se iznose noviteti u flori paprati (*Filicopsida*) biokovskog masiva, koji do sada nisu konstatirani na ovoj planini. Te vrste su sljedeće: *Asplenium fissum* Kit. ex Willd., *Polypodium cambricum* L., *Cheilanthes acrostica* (Balbis) Tod. i *Pteridium aquilinum* (L.) Kuhn.

**Ključne riječi:** *Filicopsida*, *Asplenium fissum*, *Polypodium cambricum*, *Cheilanthes acrostica*, *Pteridium aquilinum*.

### INTRODUCTION

From an analysis of many floristic works concerning the flora of Biokovo (Fig. 1) in a restricted and an extended sense (e. g.: KUŠAN, 1969; MAYER, 1983; PAVLETIĆ, Zi., 1987; RAC & LOVRIĆ, 1987; RADIĆ, 1976; etc.) it can be stated that ferns (*Filicopsida*) of the following species have been adduced: *Adiantum capillus-veneris* L., *Botrychium lunaria* (L.) Swartz in Schrader, *Athyrium filix-femina* (L.) Roth, *Polypodium vulgare* L., *Asplenium trichomanes* L., *A. trichomanes-ramosum* L. (= *A. viride* Hudson), *A. adiantum-nigrum* L., *A. ruta-muraria* L., *A. ceterach* L. (= *Ceterach officinarum* DC.), *A. javorkeanum* Vida, *A. scolopendrium* L. (= *Phyllitis scolopendrium* (L.) Newmann, *Scolopendrium officinale* Sm.), *Cystopteris fragilis* (L.) Bernh. in Schrader, *C. alpina* (Lam.) Desv. (= *C. regia* auct. plur. pro parte), *Polystichum lonchitis* (L.) Roth,



Fig. 1. Map of Croatia with the position of the Biokovo mountain

*P. aculeatum* (L.) Roth (= *P. lobatum* (Hudson) Bast.), *Dryopteris filix-mas* (L.) Schott, *D. pallida* (Bory) C. Chr. ex Maire & Petitmengin subsp. *pallida*.

During our floristic research we have found 4 more species of these groups of plants, which we are presenting in this work (Fig. 2). Together with the 17 species already known, this makes 21 species known in all, enhancing our picture of the biological variety of this interesting massif.

The scientific list of the second edition of the work *Flora Europaea* (TUTIN *et al.*, 1993) has been used.

## RESULTS OF THE RESEARCH

### 1) *ASPLENIUM FISSUM* Kit. ex Willd. (Fam. *Aspleniaceae*)

This species is distributed on many Dinaric mountains, entering into the known association *Asplenio – Silenetum saxifragae* Horvat 62 (= *Asplenietum fissi liburnicum* Horvat), (HORVAT *et al.*, 1974) in the vegetation type *Potentilletalia caulescentis* Br.-Bl., located in the fissures of the limestone, like some other chasmophytical communities.

At several altitudes in the region of Troglav we have found them together with other species: *Arenaria gracilis* Waldst. & Kit., *Silene saxifraga* L., *Cystopteris fragilis* (L.) Bernh. in Schrader, *Asplenium trichomanes* L., *A. ruta muraria* L., *Sesleria juncifolia* Suffr. and others.

The fact that this species has not been found previously on this massif is explained by its rareness in the area.

## 2) *POLYPODIUM CAMBRICUM* L. (Fam. *Polypodiaceae*)

(Syn.: *P. australe* Fee, *P. serratum* (Willd.) Sauter, non Aublet, *P. vulgare* L. var. *serratum* Willd.)

Found in the valley of the Cetina, in shady places.

## 3) *CHEILANTHES ACROSTICA* (Balbis) Tod. (Fam. *Adiantaceae*)

(Syn.: *Ch. fragrans* auct. pro parte, non (L.) Swartz, *C. odora* Swartz)

We found them only rarely, in fissures of the Podbiokovo rocks – Stupica (lower parts of the mountain).

## 4) *PTERIDIUM AQUILINUM* (L.) Kuhn subsp. *AQUILINUM* (Fam. *Hypolepidaceae*)

(Syn.: *Pteris aquilina* L.)

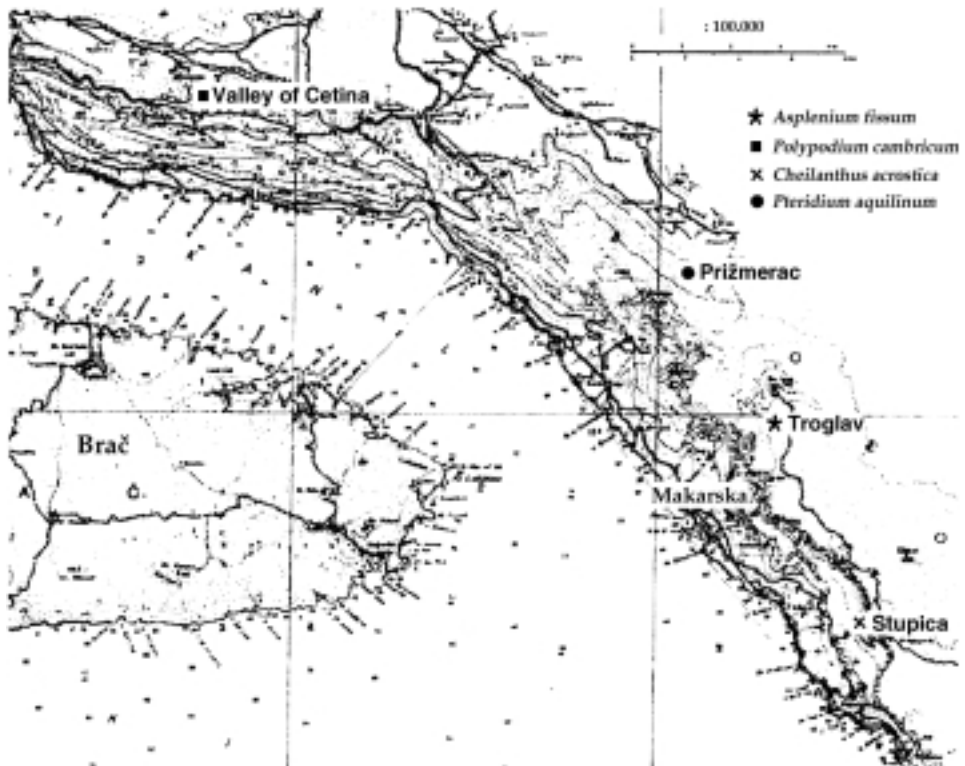


Fig. 2. The localities of the species: *Asplenium fissum* Kit. ex Wild, *Polypodium cambricum* L., *Cheilanthes acrostica* (Balbis) Tood., *Pteridium aquilinum* (L.) Kuhn. subsp. *aquilinum*



*Asplenium fissum* Kit. ex Willd.



*Polypodium cambricum* L.

RAC & LOVRIĆ (1987) have adduced this species for the Zabiokovo region (parts behind the mountain) under the name *P. tauricum* Grosg. (= *P. aquilinum* subsp. *brevipes* Wulf.)

In the meantime this taxon has been described in Crimea (TUTIN *et al.*, 1993) among the cosmopolite variety *P. aquilinum* (L.) Kuhn. In the whole Zabiokovo region this species often appears, and is presented by a typical taxon. Searching in the floristic literature we have not found that it has been registered for these regions, in either old nor new publications.

The only mention of it has been in the phytocoenological literature, where it has been described in one exceptional forested surface, an underbrush of dark hop hornbeam and flowering ash on the interior slopes of Biokovo above the Prižmerac well (Zagvozd) (VRDOLJAK, 1983).

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