

New records to the moss flora of Montenegro

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Abstract – Eight moss species – *Dicranella subulata*, *Ditrichum pallidum*, *Physcomitrella patens*, *Pseudoleskeella rupestris*, *Orthotrichum tenellum*, *Platygyrium repens*, *Rhynchostegium rotundifolium*, *Scleropodium cespitans* are recorded for the first time to the bryoflora of Montenegro. *Pseudoleskeella rupestris* is a new record for the Balkan Peninsula, whereas *Rhynchostegium rotundifolium* and *Scleropodium cespitans* are considered to be threatened in Europe.

Mosses / Chorology / Morača River / Montenegro / Balkan Peninsula

In spite of the numerous prospecting visits of European researchers, who mainly visited the country during the first half of the 20th century (Dragićević & Veljić, 2006), Montenegro is still a bryologically underknown country. Most of the available data concern certain coastal cities, canyons of the rivers Mrtica (Milikić, 2001; Dragićević *et al.*, 2001, 2002) and Tara (Dragićević *et al.*, 2003; Sabovljević, 2003), mountains Durmitor (Martinčić, 1964; Kürscher & Parolly, 1997), Prokletije (Martinčić, 2006), Sinjavina (Dragićević *et al.*, 2007), Rumija and Lovćen (Erzberger & Papp, 2007; Papp & Erzberger, 2007), Orjen (Cvetić & Sabovljević, 2004), Orjen and Bjelasica (Erzberger *et al.*, 2008). Dragićević & Veljić (2006) summarized the results of the research so far done on Montenegro bryophytes (569 species, out of which 1 hornwort, 101 liverworts and 467 mosses). Later, Ros *et al.* (2007) mentioned 105 liverworts, and Sabovljević *et al.* (2008) 491 mosses for Montenegro.

In this paper eight moss species (*Dicranella subulata* (Hedw.) Schimp., *Ditrichum pallidum* (Hedw.) Hampe, *Orthotrichum tenellum* Bruch *ex* Brid., *Physcomitrella patens* (Hedw.) Bruch & Schimp., *Pseudoleskeella rupestris* (Berggr.) Hedenäs *et* L. Söderstr., *Platygyrium repens* (Brid.) Schimp., *Rhynchostegium rotundifolium* (Scop. *ex* Brid.) Schimp., *Scleropodium cespitans* (Wilson *ex* Müll.Hal.) L.F. Koch are reported for the first time in Montenegro. The record of *Pseudoleskeella rupestris* is also the first one for the Balkan Peninsula, and two species here reported (*Scleropodium cespitans* and *Rhynchostegium rotundifolium*) are considered to be threatened in Europe. All of them correspond to specimens collected in the basin of the Morača River (Fig. 1).

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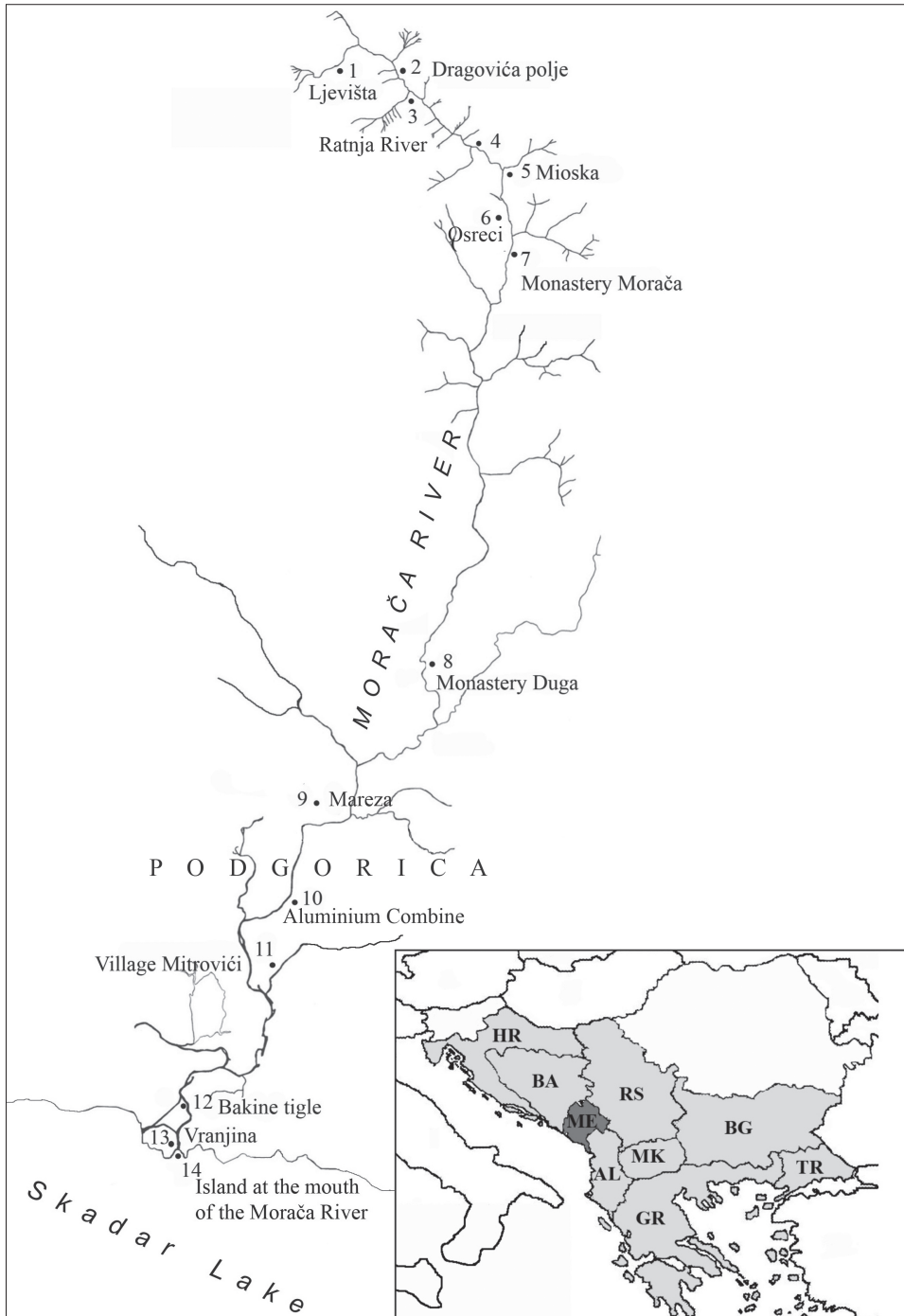


Fig. 1. The study area with corresponding localities of collection (1-14) and location of Montenegro within the Balkan Peninsula.

For each taxon, the number of the corresponding locality is given, together with the data on its ecology and its distribution in the Balkan Peninsula, according to Sabovljević *et al.* (2008). Nomenclature follows Hill *et al.* (2006). Voucher specimens are kept at the Natural History Museum of Montenegro in Podgorica.

Balkan countries and abbreviations: Albania, AL; Bosnia-Herzegovina, BA; Bulgaria, BG; Croatia, HR; Greece, GR; Macedonia, MK; Serbia, RS; Turkey, TR (European part).

* species in the European Red List (ECCB, 1995).

Dicranella subulata (Hedw.) Schimp.

2, Dragovića polje, CN 64, 620 m a.s.l., 27/10/2004, wet, limestone cliff near road, associated with *Pellia epiphylla* (L.) Corda; 4, on the way of Mioska toward Dragovića polje, CN 64, 410 m a.s.l., 27/10/2004, wet, limestone cliff on the road side, associated with *Pellia epiphylla* (L.) Corda and *Cephalozia bicuspidata* (L.) Dumort.; 8, Monastery Duga, CN 60, 110 m a.s.l., 14/08/1997, limestone rock by the river; 11, Village Mitrovići, Zeta plain, CM 58, 20 m a.s.l., 14/09/2005, damp soil, associated with *Barbula unguiculata* Hedw. and *Bryum argenteum* Hedw.; 13, Vranjina hill, Monastery St. Nikola, CM 48, 60 m a.s.l., damp sandstone, associated with *Pleurochaete squarrosa* (Brid.) Lindb. BG, BA, GR, HR, MK, SR.

Ditrichum pallidum (Hedw.) Hampe

1, Ljevišta, CN 64, 1.000 m. a.s.l., 29/07/2005, on soil among limestone rocks. BG, BA, HR, RS.

Orthotrichum tenellum Bruch *ex* Brid.

9, Podgorica, spring Mareza, CN 49, 35 m a.s.l., 24/05/1997, on the bark of *Alnus* sp. BG, GR, HR, RS.

Physcomitrella patens (Hedw.) Bruch *et* Schimp.

12, Bakine tige, Zeta plain, CM 48, 12 m a.s.l., 22/07/2006, clay-sandy soil; 14, island at the mouth of the Morača River in Skadar Lake, CM 47, 6 m a.s.l., 20/07/2007, sandy soil, associated with *Riccia cavernosa* Hoffm. BG, BA, GR, HR, RS.

Pseudoleskeella rupestris (Berggr.) Hedenäs *et* L. Söderstr.

3, Ratnja River, CN 64, 523 m a.s.l., 27/10/2004, soil on limestone rock (exposed).

Platygyrium repens (Brid.) Schimp.

5, brook Slatina, Mioska, CN 74, 400 m a.s.l., 25/06/2005, conglomerate stone-wall along the road (woodland), associated with *Anomodon viticulosus* (Hedw.) Hook. *et* Taylor, *Thuidium assimile* (Mitt.) A. Jaeger, *Brachythecium rutabulum* (Hedw.) Schimp., *Frullania dilatata* (L.) Dumort. and *Radula complanata* (L.) Dumort.; 6, Osreci, near Monastery Morača, CN 73, 350 m a.s.l., 25/06/2005, on the bark of *Carpinus* sp., associated with *Radula complanata* (L.) Dumort.; 10, Podgorica, Aluminium Combine, CM 59, 30 m a.s.l., 29/06/2004, on the bark of pine (*Pinus* sp.), associated with *Syntrichia ruralis* (Hedw.) F. Weber & D. Mohr. BG, BA, GR, HR, RS, TR.

****Rhynchostegium rotundifolium*** (Scop. *ex* Brid.) Schimp.

7, Monastery Morača, CN 73, 287 m a.s.l., 18/05/2005, limestone rock, associated with *Anomodon attenuatus* (Hedw.) Huebener. BG, RS.

****Scleropodium cespitans*** (Wilson *ex* Müll.Hal.) L.F. Koch

10, Podgorica, Aluminium Combine, CM 59, 30 m a.s.l., 29/06/2004, shaded rock in grove near riverside. ?GR.

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