

Supplementary materials for

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BRYOPHYTE VEGETATION OF NIZHNY NOVGOROD PROVINCE  
(EUROPEAN RUSSIA)

Arctoa 32: 10-25

## LOCALIZATION OF RELEVES

1 – 14.VIII.1999. Vetluga distr., nr. Klenovik, fir–spruce forest with linden 58.0032°N, 45.4686°E; 2 – 26.V.2000. Tonshaevo distr., nr. Burepolom, of fir–spruce forest along Pizhma River 57.97554° N, 47.1459°E; 3 – 28.V.2000. Tonshaevo distr., nr. Sherstky, Pizhemiyskiy nature reserve, floodplain of Pizhma River, fir–spruce forest, 57.9790°N, 47.3989°E. 08.V.1999. 4 – 23.VIII.1999. Varnavino distr., 2,5 km W from Ruseniha, fir–spruce forest, 57.4463°N, 44.8308°E; 5 – 21.VIII.2000. Varnavino distr., between Nepogodiha and Reshetiha, wet large–fern fir–spruce forest along Varvazh River, 57.7670°N, 45.0784°E; 6 – 19.VIII.1999. Vetluga distr., nr. Golubiha, floodplain of Vetluga River, fir–spruce with linden, 57.64595°N, 45.19882°E; 7 – 24.VIII.1999. Varnavino distr., nr. Severnyi, fir–spruce forest along Shada and Agrafenka Rivers, 57.5838°N, 44.7122°E; 8 – 23.VIII.2000. Uren distr., nr. Bolshoe Karpovo, fir–spruce forest with linden, 57.4368°N, 46.0222°E; 9 – 21.VIII.2000. Tonkino distr., Tonkinskiy nature reserve, fir–spruce forest with linden, 57.3447°N, 46.4460°E; 10 – 23.VIII.2000. Tonkino distr., nr. Ipatovo, spruce forest along Usta River, 57.2543°N, 46.2815°E; 11 – 27.VIII.2000. Kovernino distr., nr. Neveyka, pine–spruce forest, 57.3984°N, 44.3154°E; 12 – 10.IX.2003. Krasnye Baki distr., nr. Dmitrievskoe, fir–spruce forest with linden along Vetluga River, 57.2048°N, 45.0933°E; 13 – 24.VIII.2000. Sharanga distr., Kilemarskiy nature reserve, nr. Tanayka, fir–spruce forest along Shkleya River, 56.9841°N, 46.4197°E; 14 – 27.VIII.2003. Semyonov distr., nr. Moshna, birch and pine forests with predominance of ferns and *Vaccinium myrtillus*, 56.9301°N, 44.6993°E; 15 – 06.VI.2006. Bor distr. Kerzhents State Nature Reserve, spruce forest along Vishnya River 56.4879°N, 44.81477°E; 16 – 02.X.2004. nr. Dzerzhinsk, floodplain oak forest along Oka River, 56,2154°N, 43,4410°E; 17 – 04.V.2003. N. Novgorod, Sovetskiy distr. aspen forest with predominance of nemoral herbs, 56.24502°N, 43.94714°E; 18 – 08.IX.2002. Vorotynets distr., nr. Kamenka, wet spruce forest, 56.2248°N, 45.5143°E; 19 – 22.VII.2000. Arzamas distr., nr. Staraya Pustyn, NNSU Biostation, spruce–pine forest with linden, 55.6707°N, 43.5838°E; 20 – Buturlino distr., nr. Tartaley, oak–linden–ash forest with predominance of *Mercurialis perennis* 55.4538°N, 45.0986°E; 21 – 22.VIII.1998. Pervomaysk distr., nr. Neley, elm–oak–aspen forest with predominance of *Aegopodium podagraria* and *Carex pilosa*, 54.8189°N, 43.9906°E; 22 – 24.VIII.1998. Lukoyanov distr., broad–leaves forests in the upper streams of Ezhat River, oak–forest with predominance of *Aegopodium podagraria* and *Carex pilosa*, 54.9660°N, 44.5233°E; 23 – 09.V.1999. Sechenovo distr., nr. Torgovoe Talyzino, oak–linden forest with predominance of *Aegopodium podagraria* and *Carex pilosa*, 55.0575°N, 45.7652°E; 24 – 05.IX.1998. Lukoyanov distr., nr. Kurley, oak–linden–maple forest with predominance of *Aegopodium podagraria*, 54.7344°N, 44.37878°E; 25 – 27.VIII.2003. Pochinky distr., nr. Sadovka, linden–oak forest with predominance of *Aegopodium podagraria*

and *Carex pilosa*, 54.5999°N, 44.3944°E; 26 – 23.VI. 2022. Bogorodsk distr. right side of Volga-river nr. Olenino, broad-leaved forest, 55.1985°N, 43.6608°E; 27 – 14.VIII.2022. Tonkino distr., Tonkinsky nature reserve, nr. Volkovo, fir–spruce forest with linden, 57,34405°N, 46,43847°E, 28 – 18.VII. 2022. Arzamas distr., nr. Staraya Pustyn, NNSU Biostation, spruce–pine forest with linden, 55.6707°N, 43.5838°E.

Table 1. Association *Racomitrio-Polytrichetum piliferi* von Huebschmann 1967

|                                       | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13  | 14 | 15  | <b>C<br/>O<br/>N<br/>S<br/>T</b> |
|---------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|----------------------------------|
| Number of releve                      | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13  | 14 | 15  |                                  |
| Localization of releve                | 11 | 11 | 19 | 19 | 16 | 16 | 16 | 19 | 19 | 10 | 19 | 11 | 10  | 19 | 19  |                                  |
| Substratum                            | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S   | S  | S   |                                  |
| Width of the plot, cm                 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50  | 50 | 40  |                                  |
| Length of the plot, cm                | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 30 | 100 | 50 | 100 |                                  |
| Cover, %                              | 70 | 60 | 60 | 70 | 90 | 90 | 90 | 70 | 70 | 80 | 80 | 80 | 70  | 80 | 70  |                                  |
| Number of species in releve           | 5  | 6  | 6  | 5  | 4  | 6  | 5  | 4  | 5  | 7  | 5  | 6  | 6   | 7  | 6   |                                  |
| Diagnostic species of association     |    |    |    |    |    |    |    |    |    |    |    |    |     |    |     |                                  |
| <i>Polytrichum piliferum</i>          | 5  | 4  | 4  | 4  | 4  | 4  | 2  | 3  | 3  | 5  | 4  | 4  | 3   | 3  | 2   | <b>V</b>                         |
| Diagnostic species of alliance        |    |    |    |    |    |    |    |    |    |    |    |    |     |    |     |                                  |
| <i>Brachythecium albicans</i>         | +  | +  | +  | +  | 1  | r  | 1  |    |    |    |    |    |     |    |     | <b>■</b>                         |
| <i>Syntrichia ruralis</i>             |    |    |    | 2  | 2  | 2  | 4  | 3  | 3  | r  | +  | +  | +   |    |     | <b>■</b>                         |
| Diagnostic species of order and class |    |    |    |    |    |    |    |    |    |    |    |    |     |    |     |                                  |
| <i>Ceratodon purpureus</i>            | 1  | 2  | 1  | r  | 2  |    | +  |    | +  | 1  | 2  | +  | +   |    |     | <b>■</b>                         |
| <i>Polytrichum juniperinum</i>        |    |    |    |    |    | +  |    | 1  | 1  | 1  | +  | 2  | 3   | 2  | 3   | <b>■</b>                         |
| <i>Cephoziella divaricata</i>         |    |    |    |    |    |    |    |    |    | r  |    | r  | r   | +  | +   | <b>■</b>                         |
| Other species                         |    |    |    |    |    |    |    |    |    |    |    |    |     |    |     |                                  |
| <i>Amblystegium serpens</i>           |    |    | +  |    |    |    |    |    |    |    |    |    |     |    |     | <b>I</b>                         |
| <i>Abietinella abietina</i>           |    |    |    | +  |    | r  | 1  | +  |    |    |    |    |     |    |     | <b>■</b>                         |
| <i>Bryum argenteum</i>                | 1  |    |    |    |    |    |    |    |    |    | +  |    |     |    |     | <b>I</b>                         |
| <i>Dicranum scoparium</i>             |    | +  |    |    |    |    |    |    |    |    |    |    |     |    |     | <b>I</b>                         |
| <i>Leptobryum piriforme</i>           | +  |    | +  |    |    |    |    |    |    |    |    |    |     |    |     | <b>I</b>                         |
| <i>Plagiothecium denticulatum</i>     |    |    |    |    |    |    |    |    |    |    |    |    |     | +  | +   | <b>I</b>                         |
| <i>Pleurozium schreberi</i>           |    | r  | r  |    |    |    |    |    | r  |    |    |    |     | +  | 1   | <b>■</b>                         |
| <i>Pogonatum urnigerum</i>            |    |    |    |    |    |    |    |    |    | +  |    |    | +   | +  |     | <b>I</b>                         |
| <i>Pohlia nutans</i>                  |    | 1  |    |    |    | +  |    |    |    | +  |    | 1  | 1   | 2  | 2   | <b>■</b>                         |

Table 2. Association *Brachytecietum albicantis* Gams ex Neumayr 1927

|  | 1  | 2  | 3  | 4  | 5  | 6   | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17  | 18 | 19  | 20 | C<br>O<br>N<br>S<br>T |
|--|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|----|-----------------------|
| Number of releve                                     | 1  | 2  | 3  | 4  | 5  | 6   | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17  | 18 | 19  | 20 |                       |
| Localization of releve                               | 9  | 19 | 9  | 14 | 11 | 12  | 19 | 11 | 11 | 19 | 11 | 17 | 12 | 9  | 17 | 17 | 19  | 13 | 13  | 13 |                       |
| Substratum   | S  | R  | S  | S  | PS | S   | S  | BP | R  | R  | S  | S  | S  | S  | S  | S  | S   | BP | R   | PS |                       |
| Width of the plot, cm                                | 50 | 30 | 20 | 20 | 30 | 50  | 50 | 30 | 20 | 10 | 20 | 30 | 50 | 40 | 50 | 20 | 50  | 40 | 20  | 40 |                       |
| Length of the plot, cm                               | 50 | 50 | 40 | 30 | 10 | 50  | 20 | 20 | 80 | 40 | 20 | 20 | 50 | 50 | 50 | 40 | 50  | 20 | 100 | 10 |                       |
| Cover, %   | 90 | 90 | 80 | 80 | 70 | 100 | 90 | 80 | 80 | 80 | 90 | 90 | 80 | 70 | 90 | 90 | 100 | 90 | 90  | 90 |                       |
| Number of species in releve                          | 8  | 4  | 7  | 4  | 5  | 6   | 7  | 4  | 4  | 6  | 8  | 3  | 4  | 5  | 4  | 4  | 5   | 2  | 1   | 2  |                       |
| Height above the ground, cm                          | -  | -  | -  | -  | 10 | -   | -  | 20 | -  | -  | -  | -  | -  | -  | -  | -  | -   | 20 | -   | 10 |                       |
| Diagnostic species of association and subassociation |    |    |    |    |    |     |    |    |    |    |    |    |    |    |    |    |     |    |     |    |                       |
| <i>Brachytecium albicans</i>                         | 1  | 1  | 2  | 2  | 3  | 3   | 3  | 4  | 4  | 4  | 3  | 3  | 2  | 1  | 5  | 5  | 5   | 5  | 5   | 4  | V                     |
| <i>Syntrichia ruralis</i>                            | 2  | +  | +  | +  | 1  | 1   |    |    |    |    |    |    |    |    |    |    |     |    |     |    | I                     |
| Diagnostic species of alliance, order and class      |    |    |    |    |    |     |    |    |    |    |    |    |    |    |    |    |     |    |     |    |                       |
| <i>Ceratodon purpureus</i>                           | 4  | 5  | 3  | 4  | 2  | 2   | 1  | 2  | 1  | +  | +  | +  | 1  | 2  | r  | +  | 1   |    |     |    | IV                    |
| <i>Polytrichum juniperinum</i>                       |    |    |    |    |    | 1   |    |    |    |    |    |    |    | +  |    |    |     |    |     |    | I                     |
| <i>Polytrichum piliferum</i>                         |    | +  |    |    | +  |     |    |    | +  |    | r  |    | r  | +  |    |    | r   |    |     |    | I                     |
| Other species  |    |    |    |    |    |     |    |    |    |    |    |    |    |    |    |    |     |    |     |    |                       |
| <i>Amblystegium serpens</i>                          | r  |    |    |    |    |     | r  |    |    | 1  | +  |    |    |    |    |    |     |    |     |    | I                     |
| <i>Abietinella abietina</i>                          |    |    |    |    | +  |     |    | +  |    |    |    |    |    |    |    |    |     |    | +   | 2  | I                     |
| <i>Bryum argenteum</i>                               |    |    | +  |    |    |     |    |    |    | +  | r  | 3  | 2  | 2  | 1  | 1  |     |    |     |    | I                     |
| <i>Ptychostomum crebberhimum</i>                     | 1  |    | +  |    |    |     |    |    |    |    |    |    |    |    |    |    |     |    |     |    | I                     |
| <i>Ptychostomum pallens</i>                          | r  |    | r  |    |    |     |    |    |    |    |    |    |    |    |    |    |     |    |     |    | I                     |
| <i>Ptychostomum pseudotriquetrum</i>                 | 1  |    | +  |    |    | +   |    |    |    |    |    |    |    |    |    |    |     |    |     |    | I                     |
| <i>Pleurozium schreberi</i>                          |    |    |    |    |    |     | 2  |    |    |    |    |    |    |    |    |    |     |    |     | +  | I                     |
| <i>Pohlia nutans</i>                                 | r  |    |    | +  |    |     | +  |    | 1  |    | 1  |    |    |    | +  | +  | +   |    |     |    | I                     |

Low constancy species: *Dicranum scoparium* (7-+); *Eurhynchiastrum pulchellum* (10-+); *Jochenia pallescens* (7-+); *Stereodon pratensis* (8-+); *Leptobryum piriforme* (11-+); *Plagiothecium denticulatum* (10-+); *Pohlia annotina* (6-r).

Table 3. Association *Pleurozietum schreberi* Wiśniewski 1930

|                                       | 1   | 2  | 3  | 4   | 5  | 6  | 7   | 8   | 9   | 10  | 11 | 12  | 13  | 14 | 15  | 16  | 17  | 18 | 19  | 20 | 21 | 22 | 23 | 24  | 25  | C<br>O<br>N<br>S<br>T |   |
|---------------------------------------|-----|----|----|-----|----|----|-----|-----|-----|-----|----|-----|-----|----|-----|-----|-----|----|-----|----|----|----|----|-----|-----|-----------------------|---|
| Number of releve                      | 1   | 2  | 3  | 4   | 5  | 6  | 7   | 8   | 9   | 10  | 11 | 12  | 13  | 14 | 15  | 16  | 17  | 18 | 19  | 20 | 21 | 22 | 23 | 24  | 25  |                       |   |
| Localization of releve                | 19  | 9  | 9  | 11  | 6  | 7  | 13  | 13  | 19  | 14  | 11 | 2   | 19  | 19 | 7   | 18  | 18  | 13 | 12  | 13 | 13 | 12 | 1  | 19  | 19  |                       |   |
| Substratum                            | S   | R  | PA | S   | R  | R  | S   | S   | S   | S   | PS | S   | S   | R  | S   | S   | S   | TC | S   | PT | PT | TC | TC | S   | S   |                       |   |
| Width of the plot, cm                 | 100 | 20 | 30 | 100 | 30 | 20 | 100 | 100 | 100 | 100 | 40 | 100 | 100 | 20 | 100 | 100 | 100 | 30 | 100 | 30 | 40 | 30 | 30 | 100 | 100 |                       |   |
| Length of the plot, cm                | 100 | 50 | 10 | 100 | 70 | 50 | 100 | 100 | 100 | 100 | 10 | 100 | 100 | 50 | 100 | 100 | 100 | 40 | 100 | 40 | 50 | 40 | 40 | 100 | 100 |                       |   |
| Cover, %                              | 100 | 80 | 80 | 100 | 90 | 90 | 100 | 100 | 100 | 100 | 80 | 100 | 100 | 90 | 100 | 100 | 100 | 90 | 100 | 80 | 90 | 90 | 80 | 100 | 100 |                       |   |
| Number of species in releve           | 1   | 6  | 8  | 5   | 6  | 6  | 8   | 4   | 3   | 3   | 6  | 4   | 3   | 5  | 5   | 5   | 4   | 5  | 6   | 6  | 7  | 4  | 4  | 4   | 3   |                       |   |
| Height above the ground, cm           | –   | –  | 10 | –   | –  | –  | –   | –   | –   | –   | 10 | –   | –   | –  | –   | –   | –   | 40 | –   | 40 | 50 | 40 | 40 | –   | –   |                       |   |
| Diagnostic species of association     |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       |   |
| <i>Hylocomium splendens</i>           |     |    |    |     |    |    |     |     |     |     |    | +   | 1   | 1  | 2   | 3   | 2   | 2  | 3   | 5  | 3  | 4  | 4  | 4   | 4   | 5                     | ■ |
| <i>Ptilium crista-castrensis</i>      |     |    |    | 2   | 2  | 1  | 4   | 2   |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| Diagnostic species of alliance        |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       |   |
| <i>Pleurozium schreberi</i>           | 5   | 4  | 4  | 4   | 4  | 4  | 2   | 4   | 2   | 1   | 4  | 4   | 4   | 4  | 3   | 3   | 2   |    |     |    |    |    |    |     |     | +                     | ■ |
| <i>Dicranum scoparium</i>             |     | r  | r  |     | +  | +  |     |     |     |     |    |     |     | +  |     |     |     |    |     | r  | 1  |    |    |     |     |                       | ■ |
| Diagnostic species of order and class |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       |   |
| <i>Hylocomiadelphus triquetrus</i>    |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     | 4  | 3   | 3  | +  | 1  |    |     |     |                       | ■ |
| Other species                         |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       |   |
| <i>Dicranum polysetum</i>             |     |    |    |     |    |    |     | 1   | 4   | 5   | 2  | 2   | 2   | 2  | 1   |     |     |    |     |    |    |    |    |     | 2   | +                     | ■ |
| <i>Brachythecium salebrosum</i>       |     |    | 1  |     |    |    |     | +   | +   |     | +  | +   | +   | +  | +   | +   | +   |    |     | +  |    | +  |    |     |     |                       | ■ |
| <i>Sciuro-hypnum oedipodium</i>       |     |    | 1  | +   |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Sciuro-hypnum reflexum</i>         |     | 1  |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    | +  |    |    |     |     |                       | ■ |
| <i>Sciuro-hypnum starkei</i>          |     |    |    |     |    | 2  |     |     |     |     | +  |     |     |    |     | +   |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Climacium dendroides</i>           |     |    |    |     |    |    | 1   |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Eurhynchiastrum pulchellum</i>     |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     | 1  |     |    |    | 1  | 1  |     |     |                       | ■ |
| <i>Jochenia pallescens</i>            |     | 1  | +  |     | +  |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Lophocolea heterophylla</i>        |     | r  | r  |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    | r   |     |                       | ■ |
| <i>Dicranum montanum</i>              |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Plagiomnium cuspidatum</i>         |     |    |    |     |    |    |     |     |     |     |    |     |     |    |     |     |     |    | 1   | 1  | 1  | 2  | 2  | 2   |     |                       | ■ |
| <i>Plagiothecium denticulatum</i>     |     |    |    | +   |    | +  |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Plagiothecium laetum</i>           |     | +  | +  |     |    | 1  |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |
| <i>Rhodobryum roseum</i>              |     |    |    |     |    |    | 2   |     |     |     | 2  |     |     | +  |     |     |     |    | +   |    |    |    |    |     |     |                       | ■ |
| <i>Sanonia uncinata</i>               |     |    | 1  |     | 1  |    |     |     |     |     |    |     |     |    |     |     |     |    |     |    |    |    |    |     |     |                       | ■ |

Low constancy species: *Calliargon cordifolium* (5–+); *Lophocolea minor* (21–r); *Plagiochila porelloides* (18–+); *Plagiomnium medium* (7–+); *Pohlia nutans* (4–r); *Polytrichum commune* (14–+); *Ptilidium pulcherrimum* (21–r); *Sphagnum girgensonii* (19–1); *S. squarrosum* (16–+).

Table 4. Association *Eurhynchietum swartzii* Waldheim 1944

|  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | C<br>O<br>N<br>S<br>T |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------------|
| Number of releve                                     | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |                       |
| Localization of releve                               | 17 | 17 | 25 | 25 | 23 | 23 | 19 | 17 | 17 | 24 | 24 | 17 | 22 | 17 | 17 |                       |
| Substratum   | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |                       |
| Width of the plot, cm                                | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |                       |
| Length of the plot, cm                               | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |                       |
| Cover, %   | 50 | 40 | 60 | 80 | 70 | 60 | 70 | 60 | 90 | 70 | 80 | 40 | 90 | 60 | 70 |                       |
| Number of species in releve                          | 3  | 3  | 2  | 3  | 4  | 7  | 3  | 5  | 7  | 4  | 6  | 8  | 7  | 2  | 3  |                       |
| Diagnostic species of association                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Oxyrrhynchium hians</i>                           | 2  | 5  | 5  | 3  | 3  | 4  | 4  | 4  | 4  | 4  | 5  | 3  | 3  | 4  | 5  | V                     |
| <i>Fissidens taxifolius</i>                          |    |    |    |    |    |    |    |    |    | 1  | 1  | 2  | 1  | 2  | 1  | ■                     |
| Diagnostic species of order <i>Brachythecietalia</i> |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Amblystegium serpens</i>                          |    |    |    |    |    | 1  |    |    |    |    |    |    |    |    |    | I                     |
| <i>Brachythecium rivulare</i>                        | 2  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | I                     |
| <i>Brachythecium rutabulum</i>                       |    |    |    |    |    | r  | +  | 1  | +  | +  | 1  | 1  | 1  |    |    | ■                     |
| <i>Brachythecium salebrosum</i>                      |    |    |    |    | 2  |    |    |    |    | +  | +  | +  |    |    |    | ■                     |
| <i>Brachytheciastrum velutinum</i>                   |    |    |    |    | 1  |    |    |    |    |    |    |    | 2  |    |    | I                     |
| Other species  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Hygroamblystegium humile</i>                      |    |    |    | 2  | +  |    |    |    |    |    |    |    |    |    |    | I                     |
| <i>Campyliadelphus chrysophyllus</i>                 |    | +  |    |    |    |    |    |    |    | +  |    |    |    |    | r  | I                     |
| <i>Ceratodon purpureus</i>                           |    |    |    | 1  |    |    |    |    |    |    |    | +  |    |    |    | I                     |
| <i>Chiloscyphus polyanthos</i>                       |    |    |    |    |    |    |    |    | 1  |    |    |    | 1  |    |    | I                     |
| <i>Cirriphyllum piliferum</i>                        |    |    |    |    |    |    |    |    | 2  |    |    |    |    |    |    | I                     |
| <i>Cratoneuron filicinum</i>                         | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | I                     |
| <i>Ditrichum pusillum</i>                            |    |    |    |    |    |    |    |    |    |    |    | +  |    |    |    | I                     |
| <i>Fissidens bryoides</i>                            |    | +  |    |    |    |    |    | 1  | 2  |    |    |    |    |    |    | I                     |
| <i>Fissidens exilis</i>                              |    |    |    |    |    |    |    |    | +  |    |    | +  |    |    |    | I                     |
| <i>Leskea polycarpa</i>                              |    |    | r  |    |    | r  |    |    |    |    |    |    |    |    |    | I                     |
| <i>Plagiomnium ellipticum</i>                        |    |    |    |    |    |    | 2  | r  |    |    |    |    | r  |    |    | I                     |
| <i>Rhizomnium punctatum</i>                          |    |    |    |    |    | +  |    |    |    |    | +  |    |    |    |    | I                     |

Low constancy species: *Atrichum undulatum* (13-+); *Ptychostomum capillare* (12-+); *P. pseudotriquetrum* (6-+); *Calliergonella lindbergii* (6-+); *Leptobryum piriforme* (12-+); *Plagiomnium cuspidatum* (8-+).

Table 5. Association *Calliergonello lindbergii*-*Rhizomnietum punctatis* ass. nov.

|   | 1  | 2  | 3  | 4  | 5  | 6  | 7!  | 8  | 9  | 10 | 11 | 12  | 13 | 14 | 15  | 16 | 17 | C<br>O<br>N<br>S<br>T |
|---|----|----|----|----|----|----|-----|----|----|----|----|-----|----|----|-----|----|----|-----------------------|
| Number of releve                                | 1  | 2  | 3  | 4  | 5  | 6  | 7!  | 8  | 9  | 10 | 11 | 12  | 13 | 14 | 15  | 16 | 17 |                       |
| Localization of releve                          | 9  | 19 | 19 | 19 | 13 | 25 | 25  | 9  | 7  | 3  | 7  | 16  | 19 | 1  | 19  | 19 | 7  |                       |
| Substratum                                      | R  | SA | S  | S  | S  | AG | S   | S  | R  | R  | R  | S   | S  | R  | S   | S  | R  |                       |
| Width of the plot, cm                           | 20 | 30 | 50 | 30 | 30 | 40 | 50  | 20 | 20 | 20 | 20 | 30  | 20 | 30 | 30  | 40 | 20 |                       |
| Length of the plot, cm                          | 20 | 10 | 40 | 50 | 50 | 10 | 100 | 80 | 20 | 30 | 20 | 100 | 60 | 40 | 50  | 40 | 2  |                       |
| Cover, %  | 80 | 90 | 60 | 70 | 60 | 70 | 100 | 90 | 60 | 80 | 90 | 100 | 90 | 80 | 100 | 90 | 90 |                       |
| Number of species in releve                     | 5  | 9  | 8  | 11 | 6  | 6  | 6   | 10 | 7  | 7  | 9  | 5   | 6  | 5  | 6   | 4  | 5  |                       |
| Height above the ground, cm                     | -  | 10 | -  | -  | -  | 10 | -   | -  | -  | -  | -  | -   | -  | -  | -   | -  | -  |                       |
| Diagnostic species of association               |    |    |    |    |    |    |     |    |    |    |    |     |    |    |     |    |    |                       |
| <i>Calliergonella lindbergii</i>                |    | 2  | 2  | 2  | 2  | 2  | 2   | 1  | 1  | 3  | 3  | 4   | 4  |    |     |    |    | IV                    |
| <i>Rhizomnium punctatum</i>                     | 3  | +  | +  | +  | 1  | 2  | 1   | 3  | 2  | 1  | 3  | 2   | 2  | 3  | 4   | 4  | 4  | V                     |
| <i>Leptodictyum riparium</i>                    | 2  | 3  | 3  | 2  | 2  | 2  | +   | +  | 1  | +  |    |     |    |    |     |    |    | ■                     |
| Diagnostic species of alliance, order and class |    |    |    |    |    |    |     |    |    |    |    |     |    |    |     |    |    |                       |
| <i>Brachythecium rivulare</i>                   | +  |    |    | 2  |    |    |     | 2  |    |    | +  |     |    |    |     | 1  |    | I                     |
| <i>Chiloscyphus polyanthos</i>                  |    | r  |    |    | 1  |    |     |    |    |    |    | r   |    |    | r   |    |    | I                     |
| <i>Fontinalis anthipyretica</i>                 |    | 1  | r  |    |    |    | +   |    |    |    |    |     |    |    |     |    |    | I                     |
| Other species                                   |    |    |    |    |    |    |     |    |    |    |    |     |    |    |     |    |    |                       |
| <i>Amblystegium serpens</i>                     |    |    | 1  | 1  | +  |    |     |    | +  | +  |    |     |    | +  |     |    |    | ■                     |
| <i>Aulacomnium palustre</i>                     |    |    |    |    |    |    |     |    | 1  |    | r  |     | +  |    |     |    |    | I                     |
| <i>Brachythecium salebrosum</i>                 |    | +  | r  | r  |    |    |     |    |    | +  |    |     |    | +  | 1   |    |    | ■                     |
| <i>Ptychostomum pseudotriquetrum</i>            |    |    | +  | +  |    |    |     |    |    |    |    |     |    |    |     |    |    | I                     |
| <i>Calliergon cordifolium</i>                   | +  | r  |    |    | 1  | +  | 1   |    | 1  |    |    | +   | +  |    |     |    |    | ■                     |
| <i>Campylophyllopsis sommerfeltii</i>           |    |    |    |    |    |    |     |    |    |    | 1  |     |    |    | 2   | 2  |    | I                     |
| <i>Climacium dendroides</i>                     |    |    |    | +  |    |    | 1   |    |    | +  |    |     |    |    |     |    |    | I                     |
| <i>Lophocolea heterophylla</i>                  |    |    |    |    |    |    |     |    |    |    | r  |     |    |    | r   | r  |    | I                     |
| <i>Oxyrrhynchium hians</i>                      |    |    |    | +  |    |    |     | +  |    |    |    |     |    |    |     |    |    | I                     |
| <i>Plagiochila porelloides</i>                  |    |    |    |    |    |    |     |    |    |    | +  |     |    |    |     |    | 1  | I                     |
| <i>Plagiomnium cuspidatum</i>                   | 1  |    |    |    |    |    |     |    |    |    |    |     |    | +  |     |    |    | I                     |
| <i>Pleurozium schreberi</i>                     |    |    |    |    |    |    |     | 2  |    |    |    | 1   |    |    |     |    |    | I                     |
| <i>Riccia fluitans</i>                          |    |    | +  | +  |    |    |     |    |    |    |    |     |    |    | 1   |    |    | I                     |
| <i>Sanionia uncinata</i>                        |    | +  |    |    |    |    | 2   | +  |    | 2  |    |     |    | 2  |     |    |    | ■                     |

Low constancy species: *Atrichum undulatum* (13-+); *Blepharostoma trichophyllum* (17-+); *Dicranum scoparium* (11-+); *Herzogiella turphacea* (11-r); *Leskea polycarpa* (2-+; 6-r); *Marchantia polymorpha* (13-+); *Plagiomnium medium* (4-+); *Plagiothecium denticulatum* (8-r; 17-+); *Polytrichum formosum* (8-+); *Pseudobryum cinclidioides* (9-1); *Tetraphis pellucida* (17-1).

Table 6. Association *Anomodontetum longifolii* Waldheim 1944

|   | 1      | 2   | 3   | 4     | 5     | 6    | 7     | 8    | 9     | 10    | 11    | 12    | 13   | 14  | 15  | 16  | 17  | C<br>O<br>N<br>S<br>T |   |
|---|--------|-----|-----|-------|-------|------|-------|------|-------|-------|-------|-------|------|-----|-----|-----|-----|-----------------------|---|
| Number of releve  | 1      | 2   | 3   | 4     | 5     | 6    | 7     | 8    | 9     | 10    | 11    | 12    | 13   | 14  | 15  | 16  | 17  |                       |   |
| Localization of releve  | 13     | 19  | 19  | 25    | 20    | 22   | 25    | 24   | 25    | 24    | 23    | 13    | 20   | 13  | 9   | 19  | 19  |                       |   |
| Substratum  | AP     | L   | L   | PT    | FE    | AP   | TC    | AP   | QR    | TC    | QR    | UG    | UG   | R   | R   | L   | L   |                       |   |
| Width of the plot, cm   | 30     | 100 | 60  | 20    | 30    | 40   | 30    | 20   | 30    | 20    | 30    | 20    | 20   | 30  | 30  | 100 | 50  |                       |   |
| Length of the plot, cm  | 150    | 100 | 50  | 40    | 50    | 30   | 40    | 40   | 60    | 40    | 50    | 50    | 40   | 80  | 70  | 100 | 50  |                       |   |
| Cover, %  | 90     | 100 | 100 | 80    | 100   | 100  | 90    | 90   | 100   | 90    | 100   | 100   | 90   | 100 | 100 | 100 | 100 | 100                   |   |
| Number of species in releve   | 2      | 2   | 2   | 3     | 4     | 4    | 5     | 5    | 5     | 5     | 5     | 5     | 3    | 4   | 5   | 4   | 3   |                       |   |
| Height above the ground (limits), cm  | 20-150 | -   | -   | 20-50 | 20-70 | 0-30 | 10-50 | 0-40 | 20-80 | 20-60 | 10-60 | 40-90 | 0-40 | -   | -   | -   | -   |                       |   |
| Diagnostic species of association   |        |     |     |       |       |      |       |      |       |       |       |       |      |     |     |     |     |                       |   |
| <i>Anomodon longifolius</i>   | 5      | 5   | 5   | 5     | 5     | 5    | 5     | 4    | 4     | 4     | 4     | 4     | 4    | 4   | 4   | 4   | 4   | 4                     | V |
| Diagnostic species of alliance, order and class   |        |     |     |       |       |      |       |      |       |       |       |       |      |     |     |     |     |                       |   |
| <i>Leucodon sciuroides</i>  | 2      |     |     |       |       |      |       |      |       |       | 1     |       |      |     |     |     |     |                       | I |
| <i>Pylaisia polyantha</i>   |        |     |     |       |       |      | r     | 1    | 1     | 1     |       |       |      |     |     |     |     |                       | ■ |
| <i>Radula complanata</i>  |        |     |     |       |       |      |       | r    | 1     | +     | +     | r     |      |     |     |     |     |                       | ■ |
| Diagnostic species of order <i>Brachythecietalia</i>  |        |     |     |       |       |      |       |      |       |       |       |       |      |     |     |     |     |                       |   |
| <i>Sciuro-hypnum reflexum</i>   |        |     |     |       |       |      |       |      |       |       |       | 2     | 1    | 1   | 2   | 1   |     |                       | ■ |
| <i>Brachythecium salebrosum</i>   |        |     |     | r     | r     | +    | r     | r    |       |       |       |       |      |     | 1   | 1   | +   |                       | ■ |
| Other species   |        |     |     |       |       |      |       |      |       |       |       |       |      |     |     |     |     |                       |   |
| <i>Pseudoleskeella nervosa</i>  |        |     | 1   | 1     | 1     | 1    | 1     | 1    | +     | 1     | +     |       |      |     |     | +   |     |                       | ■ |
| <i>Eurhynchiastrum pulchellum</i>   |        |     |     |       |       |      |       |      |       |       |       |       |      |     |     |     |     | 2                     | I |
| <i>Homalia trichomanoides</i>   |        |     |     |       |       |      |       |      |       |       |       |       | 2    |     |     |     |     |                       | I |
| <i>Lewinskya speciosa</i>   |        |     |     |       |       |      |       | +    |       | +     |       |       |      |     |     |     |     |                       | I |
| <i>Plagiomnium cuspidatum</i>   |        |     |     |       |       | r    |       |      |       |       |       |       |      |     | +   | 1   | 2   |                       | ■ |
| <i>Plagiothecium denticulatum</i>   |        |     |     |       |       |      |       |      |       |       |       |       | 1    |     |     |     |     |                       | I |
| Low constancy species: <i>Amblystegium serpens</i> (17-+); <i>Hygroamblystegium varium</i> (2-+); <i>Dicranum viride</i> (11-+); <i>Lepidozia reptans</i> (5-r); <i>Leptobryum piriforme</i> (16-+); <i>Sanionia uncinata</i> (12-+); |        |     |     |       |       |      |       |      |       |       |       |       |      |     |     |     |     |                       |   |



Table 9. Association *Pylaisietum polyanthae* Felföldy 1941

|  | 1          | 2           | 3          | 4         | 5          | 6          | 7          | 8          | 9          | 10         | 11         | 12         | 13         | 14         | 15         | 16         | 17        | 18         | 19         | 20         | 21         | C<br>O<br>N<br>S<br>T |  |
|--|------------|-------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------------------|--|
| Number of releve   | 1          | 2           | 3          | 4         | 5          | 6          | 7          | 8          | 9          | 10         | 11         | 12         | 13         | 14         | 15         | 16         | 17        | 18         | 19         | 20         | 21         |                       |  |
| Localization of releve   | 13         | 13          | 4          | 13        | 13         | 1          | 13         | 11         | 13         | 13         | 21         | 8          | 1          | 13         | 3          | 13         | 25        | 25         | 25         | 25         | 25         |                       |  |
| Substratum   | TC         | PT          | PT         | PT        | PT         | PT         | PT         | PT         | PT         | PT         | TC         | PT         | TC         | TC         | PT         | TC         | TC        | AP         | FE         | TC         | TC         |                       |  |
| Width of the plot, cm  | 20         | 30          | 20         | 10        | 20         | 20         | 30         | 20         | 20         | 30         | 20         | 20         | 20         | 20         | 10         | 20         | 20        | 30         | 20         | 10         | 20         |                       |  |
| Length of the plot, cm   | 40         | 100         | 60         | 40        | 60         | 60         | 120        | 60         | 90         | 220        | 160        | 120        | 120        | 60         | 40         | 40         | 40        | 450        | 180        | 40         | 220        |                       |  |
| Cover, %   | 100        | 90          | 100        | 100       | 100        | 100        | 90         | 100        | 100        | 90         | 100        | 100        | 90         | 100        | 100        | 100        | 100       | 80         | 90         | 100        | 90         |                       |  |
| Number of species in releve  | 6          | 4           | 4          | 5         | 5          | 6          | 6          | 7          | 4          | 4          | 6          | 4          | 5          | 5          | 4          | 5          | 4         | 3          | 4          | 4          | 4          |                       |  |
| Height above the ground, cm  | 60–<br>100 | 100–<br>200 | 60–<br>120 | 40–<br>80 | 40–<br>100 | 40–<br>100 | 60–<br>200 | 40–<br>100 | 60–<br>150 | 80–<br>300 | 40–<br>200 | 40–<br>160 | 80–<br>200 | 40–<br>100 | 60–<br>100 | 60–<br>100 | 40–<br>80 | 50–<br>500 | 80–<br>260 | 60–<br>100 | 80–<br>300 |                       |  |
| Diagnostic species of association  |            |             |            |           |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            |                       |  |
| <i>Pylaisia polyantha</i>  | 5          | 5           | 5          | 5         | 5          | 5          | 4          | 4          | 4          | 4          | 4          | 4          | 4          | 4          | 3          | 3          | 4         | 4          | 4          | 5          | 5          | V                     |  |
| Diagnostic species alliance <i>Ulotion crispae</i>                                       |            |             |            |           |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            |                       |  |
| <i>Lewinskya speciosa</i>  | +          | +           | +          |           |            |            | 2          | 1          | 1          | 1          | 1          | +          |            |            | 1          |            | 1         | 1          | 1          | 1          | +          | N                     |  |
| <i>Nyholmiella obtusifolia</i>   |            | +           |            |           |            |            | 1          | +          |            | +          |            | 1          |            |            |            |            |           |            |            |            |            | I                     |  |
| Diagnostic species of class <i>Frullanio dilatatae</i> – <i>Leucodontetea sciuroidis</i> |            |             |            |           |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            |                       |  |
| <i>Radula complanata</i>   | 1          |             |            |           |            |            |            |            |            |            | +          |            | 1          |            | 2          |            | +         | +          | +          | +          | r          | I                     |  |
| <i>Leskea polycarpa</i>  |            |             |            |           |            |            | +          | +          | +          |            |            | r          |            |            |            |            |           |            |            | +          |            | I                     |  |
| <i>Frullania bolanderi</i>   |            |             |            |           |            |            | r          | r          | r          |            |            | r          |            |            |            |            |           |            |            |            |            | I                     |  |
| Diagnostic species of order <i>Dicranetalia</i>  |            |             |            |           |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            |                       |  |
| <i>Ptilidium pulcherrimum</i>  |            |             | 1          | 1         | 1          | 1          | +          |            | 1          | 2          |            |            |            | 1          |            | 1          |           |            |            |            |            | I                     |  |
| <i>Dicranum montanum</i>   |            |             |            |           | +          |            |            |            |            |            |            |            |            | 1          |            | 1          |           |            |            |            |            | I                     |  |
| <i>Dicranum scoparium</i>  |            |             |            |           |            |            |            |            |            |            |            |            | +          |            |            | +          |           |            |            |            |            | I                     |  |
| Other species  |            |             |            |           |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            |                       |  |
| <i>Sciuro-hypnum reflexum</i>  |            |             |            | +         |            | +          |            |            |            |            |            |            | r          | r          |            | r          |           |            |            |            |            | I                     |  |
| <i>Serpoleskea subtilis</i>  | +          |             | +          | +         | +          |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            | I                     |  |
| <i>Anomodon longifolius</i>  |            |             |            |           |            |            |            |            | 2          |            |            | 1          |            |            |            |            |           |            |            |            |            | I                     |  |
| <i>Anomodon viticulosus</i>  |            | 1           |            |           |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            | I                     |  |
| <i>Homalia trichomanoides</i>  | +          |             |            | +         |            |            |            |            |            |            |            |            |            |            |            |            |           |            |            |            |            | I                     |  |
| <i>Leskeella nervosa</i>   |            |             |            |           |            |            |            |            |            |            |            |            |            |            |            | 2          |           | 2          |            | +          |            | I                     |  |
| <i>Neckera pennata</i>   | r          |             |            |           | +          | +          |            |            |            |            | 1          |            |            | +          |            |            |           |            |            |            |            | I                     |  |
| <i>Sanionia uncinata</i>   |            |             |            |           |            |            |            | +          | 1          |            |            |            | +          |            | 2          |            |           |            |            |            |            | I                     |  |

Table 10. Association *Pylaisiello to polyanthae–Leskeelletum nervosae* Baisheva & al. 1994

|   | 1          | 2          | 3         | 4         | 5         | 6        | 7         | 8         | 9        | 10         | 11        | 12        | 13         | 14         | 15         | 16         | 17         | 18        | C<br>O<br>N<br>S<br>T |
|---|------------|------------|-----------|-----------|-----------|----------|-----------|-----------|----------|------------|-----------|-----------|------------|------------|------------|------------|------------|-----------|-----------------------|
| Number of releve  | 1          | 2          | 3         | 4         | 5         | 6        | 7         | 8         | 9        | 10         | 11        | 12        | 13         | 14         | 15         | 16         | 17         | 18        |                       |
| Localization of releve  | 21         | 24         | 24        | 20        | 20        | 24       | 24        | 22        | 22       | 13         | 13        | 24        | 25         | 23         | 24         | 24         | 21         | 21        |                       |
| Substratum  | TC         | TC         | QR        | QR        | US        | US       | AP        | AP        | AP       | PT         | FE        | TC        | PT         | PT         | TC         | TC         | AG         | QR        |                       |
| Width of the plot, cm   | 20         | 20         | 20        | 20        | 20        | 20       | 20        | 20        | 30       | 20         | 20        | 20        | 20         | 20         | 20         | 20         | 20         | 20        |                       |
| Length of the plot, cm  | 160        | 120        | 10        | 30        | 30        | 30       | 20        | 30        | 30       | 120        | 30        | 40        | 90         | 90         | 260        | 70         | 250        | 40        |                       |
| Cover, %  | 70         | 80         | 90        | 100       | 100       | 100      | 100       | 100       | 100      | 80         | 100       | 100       | 100        | 70         | 80         | 90         | 80         | 70        |                       |
| Number of species in releve   | 4          | 2          | 3         | 2         | 3         | 3        | 4         | 5         | 4        | 6          | 4         | 5         | 4          | 4          | 2          | 5          | 4          | 5         |                       |
| Height above the ground (limits), cm  | 40–<br>200 | 30–<br>150 | 30–<br>40 | 20–<br>50 | 20–<br>50 | 0–<br>30 | 20–<br>40 | 20–<br>50 | 0–<br>30 | 80–<br>200 | 20–<br>50 | 40–<br>80 | 30–<br>120 | 60–<br>150 | 40–<br>300 | 50–<br>120 | 50–<br>300 | 40–<br>80 |                       |
| Diagnostic species of association   |            |            |           |           |           |          |           |           |          |            |           |           |            |            |            |            |            |           |                       |
| <i>Pseudoleskeella nervosa</i>  | 5          | 5          | 5         | 5         | 5         | 5        | 5         | 4         | 4        | 4          | 4         | 4         | 4          | 3          | 3          | 3          | 2          | 1         | V                     |
| Diagnostic species of order <i>Ulotion crispae</i>  |            |            |           |           |           |          |           |           |          |            |           |           |            |            |            |            |            |           |                       |
| <i>Pylaisia polyantha</i>   |            |            | +         | 1         | 1         | 1        | 1         | 1         | 1        |            | 1         | 2         | 2          | 3          | 3          | 3          | 4          | 3         | IV                    |
| <i>Lewinskya speciosa</i>   | +          |            |           |           |           |          | r         | 1         |          | 1          | +         | 1         |            | 1          |            |            | +          |           | III                   |
| <i>Nyholmiella obtusifolia</i>  | r          |            |           |           |           |          |           |           |          |            |           | +         |            | +          |            |            |            |           | I                     |
| Diagnostic species of class <i>Frullania dilatatae–Leucodontetea sciuroidis</i>   |            |            |           |           |           |          |           |           |          |            |           |           |            |            |            |            |            |           |                       |
| <i>Radula complanata</i>  | 1          | r          |           |           | +         | r        | r         | +         |          |            | 1         | +         |            |            |            | +          | r          | +         | IV                    |
| <i>Frullania bolanderi</i>  |            |            |           |           |           |          |           |           |          |            |           |           |            | 1          |            |            |            |           | I                     |
| Other species   |            |            |           |           |           |          |           |           |          |            |           |           |            |            |            |            |            |           |                       |
| <i>Anomodon longifolius</i>   |            |            |           |           |           |          |           |           |          |            |           |           | +          |            |            | 1          |            |           | I                     |
| <i>Sciuro–hypnum reflexum</i>   |            |            | +         |           |           |          |           |           |          |            |           |           |            | +          |            |            |            | +         | I                     |
| <i>Brachythecium salebrosum</i>   |            |            |           |           |           |          |           | 1         | 2        |            | r         |           | r          |            |            |            |            |           | II                    |
| <i>Dicranum viride</i>  |            |            |           |           |           |          |           |           |          |            |           |           |            |            |            | 1          |            |           | I                     |
| <i>Ptilidium pulcherrimum</i>   |            |            |           |           |           |          |           |           |          | 1          |           |           |            |            |            |            |            |           | I                     |
| Low constancy species: <i>Campylophyllopsis sommerfeltii</i> (9–+); <i>Jochenia pallescens</i> (18–+); <i>Neckera pennata</i> (10–+). |            |            |           |           |           |          |           |           |          |            |           |           |            |            |            |            |            |           |                       |

Table 11. Association *Pylaisia polyanthae-Neckeretum pennatis* ass.nov.

|  | 1          | 2         | 3          | 4          | 5      | 6         | 7          | 8         | 9          | 10         | 11         | 12         | 13!        | 14        | 15         | 16         | 17         | 18         | 19        | 20         | 21         | 22         | 23         | <b>C<br/>O<br/>N<br/>S<br/>T</b> |  |
|--|------------|-----------|------------|------------|--------|-----------|------------|-----------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|----------------------------------|--|
| Number of releve                                     | 1          | 2         | 3          | 4          | 5      | 6         | 7          | 8         | 9          | 10         | 11         | 12         | 13!        | 14        | 15         | 16         | 17         | 18         | 19        | 20         | 21         | 22         | 23         |                                  |  |
| Localization of releve                               | 13         | 24        | 13         | 13         | 2      | 13        | 6          | 13        | 1          | 1          | 1          | 21         | 2          | 2         | 1          | 1          | 8          | 8          | 9         | 9          | 5          | 5          | 5          |                                  |  |
| Substratum   | PT         | AP        | TC         | TC         | R      | PT        | QR         | PT        | TC         | TC         | UG         | AP         | PT         | PT        | PT         | PT         | PT         | PT         | PT        | PT         | PT         | PT         | TC         |                                  |  |
| Width of the plot, cm                                | 30         | 20        | 30         | 30         | 20     | 20        | 30         | 20        | 30         | 30         | 30         | 30         | 20         | 20        | 30         | 20         | 30         | 20         | 20        | 30         | 30         | 20         | 30         |                                  |  |
| Length of the plot, cm                               | 60         | 40        | 100        | 140        | 60     | 30        | 120        | 30        | 40         | 120        | 150        | 120        | 40         | 40        | 90         | 40         | 90         | 60         | 20        | 90         | 140        | 20         | 120        |                                  |  |
| Cover, %   | 90         | 80        | 70         | 80         | 70     | 80        | 90         | 100       | 100        | 90         | 80         | 90         | 70         | 100       | 90         | 90         | 70         | 80         | 100       | 80         | 80         | 100        | 70         |                                  |  |
| Number of species in releve                          | 5          | 5         | 4          | 5          | 5      | 4         | 5          | 5         | 5          | 4          | 6          | 4          | 7          | 4         | 7          | 5          | 5          | 7          | 6         | 6          | 6          | 5          | 5          |                                  |  |
| Height above the ground (limits), cm                 | 40–<br>100 | 20–<br>60 | 40–<br>140 | 20–<br>160 | –<br>– | 30–<br>60 | 60–<br>180 | 30–<br>60 | 80–<br>120 | 60–<br>200 | 90–<br>240 | 30–<br>150 | 60–<br>100 | 30–<br>70 | 60–<br>150 | 60–<br>100 | 60–<br>150 | 40–<br>100 | 40–<br>60 | 60–<br>150 | 60–<br>200 | 80–<br>100 | 80–<br>200 |                                  |  |
| Diagnostic species of association                    |            |           |            |            |        |           |            |           |            |            |            |            |            |           |            |            |            |            |           |            |            |            |            |                                  |  |
| <i>Neckera pennata</i>                               | 4          | 4         | 5          | 5          | 4      | 4         | 4          | 4         | 4          | 5          | 4          | 4          | 4          | 4         | 4          | 4          | 3          | 3          | 3         | 3          | 4          | 5          | 5          | <b>V</b>                         |  |
| Diagnostic species of order <i>Orthotrichetalia</i>  |            |           |            |            |        |           |            |           |            |            |            |            |            |           |            |            |            |            |           |            |            |            |            |                                  |  |
| <i>Pylaisia polyantha</i>                            |            |           | +          | +          | +      | 1         | 1          | 1         | 2          | 1          | 1          | 2          | 2          | 2         | 1          | 1          | 3          | 3          | 3         | 2          |            |            |            | <b>V</b>                         |  |
| <i>Lewinskya speciosa</i>                            |            |           |            |            |        |           |            |           |            | r          | +          | +          | +          | r         | r          | r          | +          | 1          | r         | 1          | 1          | 1          | r          | <b>V</b>                         |  |
| <i>Radula complanata</i>                             |            |           |            |            |        |           |            |           |            | +          | +          | +          |            |           |            |            |            |            |           |            |            |            |            | <b>I</b>                         |  |
| Diagnostic species of order <i>Dicranetalia</i>      |            |           |            |            |        |           |            |           |            |            |            |            |            |           |            |            |            |            |           |            |            |            |            |                                  |  |
| <i>Ptilidium pulcherrimum</i>                        | r          |           | 1          | r          |        |           | 1          | +         | 1          |            |            |            | +          | +         | r          | r          | +          | 1          | +         | 1          | r          | 1          | +          | <b>V</b>                         |  |
| <i>Dicranum montanum</i>                             |            | 1         |            |            |        |           |            |           |            |            |            |            |            | +         |            | r          |            |            |           | +          |            |            |            | <b>I</b>                         |  |
| <i>Dicranum scoparium</i>                            |            |           |            |            |        |           |            |           |            |            |            |            |            | +         |            |            |            |            |           |            |            | +          |            | <b>I</b>                         |  |
| Diagnostic species of order <i>Brachythecietalia</i> |            |           |            |            |        |           |            |           |            |            |            |            |            |           |            |            |            |            |           |            |            |            |            |                                  |  |
| <i>Sciuro-hypnum reflexum</i>                        |            | 1         | r          | +          | +      |           | +          |           | r          |            |            |            | +          | 1         | 1          |            |            |            | +         |            | 1          | +          | +          | <b>■</b>                         |  |
| <i>Amblystegium serpens</i>                          | +          |           |            | +          | +      | +         |            | 1         |            |            |            |            |            |           |            |            |            |            | 2         |            |            |            |            | <b>■</b>                         |  |
| Other species  |            |           |            |            |        |           |            |           |            |            |            |            |            |           |            |            |            |            |           |            |            |            |            |                                  |  |
| <i>Homalia trichomanoides</i>                        | 2          |           |            | +          |        |           |            |           | r          |            |            |            |            |           |            |            | r          |            |           |            | +          |            |            | <b>■</b>                         |  |
| <i>Anomodon longifolius</i>                          |            |           |            |            |        |           |            |           |            |            | 1          |            |            |           |            |            |            |            |           |            |            |            |            | <b>I</b>                         |  |
| <i>Pseudoleskeella nervosa</i>                       | 1          | 1         |            |            |        |           |            |           |            |            |            |            |            |           |            |            |            |            |           |            |            |            |            | <b>I</b>                         |  |
| <i>Sanionia uncinata</i>                             |            |           |            |            |        | 1         |            | +         |            | r          |            |            |            | +         | 2          | 1          | +          |            | +         | +          |            |            |            | <b>■</b>                         |  |

Low constancy species: *Nyholmiella obtusifolia* (18+); *N. gymnostoma* (2-r); *Leucodon sciuroides* (7-1).

**Table 12.** Association *Syntrichio latifoliae-Leskeetum polycarpae* von Huebschmann 1952. subass.

*typicum* (rel. 1-6) and subass. *pylaisiellitosum polyanthae* Baisheva & al. 1994 (rel. 7-20).

|  | 1       | 2  | 3      | 4  | 5      | 6       | 7       | 8       | 9       | 10 | 11      | 12      | 13     | 14      | 15     | 16     | 17     | 18 | 19     | 20 | <b>C<br/>O<br/>N<br/>S<br/>T</b> |          |
|--|---------|----|--------|----|--------|---------|---------|---------|---------|----|---------|---------|--------|---------|--------|--------|--------|----|--------|----|----------------------------------|----------|
| Number of releve                                     | 1       | 2  | 3      | 4  | 5      | 6       | 7       | 8       | 9       | 10 | 11      | 12      | 13     | 14      | 15     | 16     | 17     | 18 | 19     | 20 |                                  |          |
| Localization of releve                               | 19      | 25 | 19     | 19 | 19     | 19      | 19      | 6       | 25      | 12 | 12      | 3       | 6      | 19      | 19     | 19     | 19     | 12 | 3      | 9  |                                  |          |
| Substratum   | R       | AP | A<br>G | SA | A<br>G | A<br>G  | A<br>G  | R       | UL      | FE | TC      | FE      | P<br>N | P<br>N  | A<br>G | A<br>G | S<br>A | PT | A<br>P | PT |                                  |          |
| Width of the plot, cm                                | 30      | 40 | 30     | 30 | 40     | 20      | 40      | 30      | 20      | 30 | 30      | 30      | 30     | 40      | 40     | 20     | 40     | 30 | 20     | 30 |                                  |          |
| Length of the plot, cm                               | 80      | 40 | 20     | 20 | 20     | 20      | 30      | 70      | 40      | 40 | 40      | 40      | 20     | 20      | 20     | 20     | 20     | 20 | 40     | 30 |                                  |          |
| Cover, %   | 10<br>0 | 80 | 90     | 90 | 90     | 10<br>0 | 10<br>0 | 10<br>0 | 10<br>0 | 90 | 10<br>0 | 10<br>0 | 90     | 10<br>0 | 90     | 90     | 90     | 90 | 90     | 90 |                                  |          |
| Number of species in releve                          | 8       | 4  | 7      | 4  | 4      | 4       | 7       | 6       | 6       | 6  | 5       | 4       | 6      | 5       | 4      | 4      | 5      | 7  | 5      | 7  |                                  |          |
| Height above the ground, cm                          | –       | 40 | 40     | 40 | 30     | 40      | 40      | –       | 40      | 40 | 40      | 40      | 40     | 40      | 30     | 30     | 40     | 40 | 40     | 50 |                                  |          |
| Diagnostic species of association and subassociation |         |    |        |    |        |         |         |         |         |    |         |         |        |         |        |        |        |    |        |    |                                  |          |
| <i>Leskea polycarpa</i>                              | 4       | 4  | 4      | 5  | 5      | 5       | 5       | 4       | 4       | 4  | 4       | 4       | 4      | 4       | 4      | 3      | 3      | 3  | 3      | 2  | <b>V</b>                         |          |
| <i>Pylaisia polyantha</i>                            |         |    |        |    |        |         | r       | 1       | 1       | 1  | 1       | 2       | 2      | 2       | 2      | 3      | 3      | 3  | 3      | 3  | <b>V</b>                         |          |
| Diagnostic species of order and class                |         |    |        |    |        |         |         |         |         |    |         |         |        |         |        |        |        |    |        |    |                                  |          |
| <i>Lewinskya speciosa</i>                            |         |    |        |    |        |         |         |         |         | +  |         |         |        | 1       |        | +      |        | +  |        | r  | <b>■</b>                         |          |
| <i>Radula complanata</i>                             |         |    |        |    |        |         |         |         | +       | r  | +       | +       |        |         |        |        |        |    |        | r  | <b>■</b>                         |          |
| <i>Nyholmia obtusifolia</i>                          |         |    |        |    |        |         |         |         |         |    |         |         |        | 1       |        | 1      |        | r  |        | 1  | <b>■</b>                         |          |
| Other species  |         |    |        |    |        |         |         |         |         |    |         |         |        |         |        |        |        |    |        |    |                                  |          |
| <i>Amblystegium serpens</i>                          | 1       | +  | +      | 1  | 1      | 1       | +       | +       | 2       | +  |         |         | 1      | +       | 1      |        |        |    | r      | r  | <b>■</b>                         |          |
| <i>Anomodon longifolius</i>                          | +       |    |        |    |        |         |         | 1       |         |    |         |         |        |         |        |        |        |    |        |    | +                                | <b>I</b> |
| <i>Brachythecium salebrosum</i>                      |         | +  | +      |    |        |         |         |         |         | 1  | 1       | 2       |        | 2       |        |        |        | +  | 1      | +  | +                                | <b>■</b> |
| <i>Ptychostomum pseudotriquetrum</i>                 |         |    |        | r  |        | r       |         |         |         |    |         |         |        | r       |        |        |        |    |        |    |                                  | <b>I</b> |
| <i>Calliergonella lindbergii</i>                     | r       |    | r      |    |        |         |         | r       |         |    |         |         |        |         |        |        |        |    |        |    |                                  | <b>I</b> |
| <i>Jochenia pallescens</i>                           |         | 2  |        | r  |        |         |         | +       | 1       |    |         |         |        |         | 1      |        | +      |    |        |    |                                  | <b>■</b> |
| <i>Leptodyctium riparium</i>                         |         |    | 2      | 1  | 1      | 1       | 1       |         |         |    |         |         |        | +       |        |        |        |    |        |    |                                  | <b>■</b> |
| <i>Pseudoleskeella nervosa</i>                       |         |    |        |    |        |         |         |         | r       |    | +       |         |        |         |        |        |        |    |        |    |                                  | <b>I</b> |
| <i>Platygyrium repens</i>                            | 1       |    |        |    |        |         |         |         |         |    |         |         |        |         |        |        |        |    |        |    |                                  | <b>I</b> |
| <i>Sanionia uncinata</i>                             | +       |    |        | +  |        |         |         | +       |         |    |         |         |        |         | +      |        | r      | r  |        |    |                                  | <b>■</b> |

Low constancy species: *Ptychostomum crebberium* (6–r); *Callicladium haldanianum* (1–+); *Campylophyllopsis sommerfeltii* (20–+); *Plagiomnium cuspidatum* (3–+); *Pohlia nutans* (1–+); *Rhizomnium punctatum* (7–+).

Table 13. Association *Syntrichio latifoliae-Leskeetum polycarpae* von Huebschmann 1952 subass. *leptodictyosum riparii* Philippi 1972

|   | 1   | 2  | 3  | 4   | 5  | 6  | 7   | 8   | 9   | 10  | 11  | 12  | 13 | 14  | 15  | C<br>O<br>N<br>S<br>T |
|---|-----|----|----|-----|----|----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----------------------|
| Number of releve                                | 1   | 2  | 3  | 4   | 5  | 6  | 7   | 8   | 9   | 10  | 11  | 12  | 13 | 14  | 15  |                       |
| Localization of releve                          | 19  | 16 | 16 | 14  | 6  | 19 | 19  | 8   | 18  | 14  | 6   | 16  | 19 | 18  | 6   |                       |
| Substratum                                      | PN  | AG | AG | R   | QR | PN | SA  | AG  | UL  | AG  | R   | AG  | PN | PN  | AG  |                       |
| Width of the plot, cm                           | 30  | 30 | 20 | 40  | 50 | 40 | 20  | 30  | 20  | 20  | 30  | 20  | 40 | 40  | 30  |                       |
| Length of the plot, cm                          | 20  | 30 | 20 | 10  | 10 | 20 | 20  | 10  | 20  | 20  | 20  | 20  | 20 | 20  | 20  |                       |
| Cover, %  | 100 | 90 | 90 | 100 | 80 | 90 | 100 | 100 | 100 | 100 | 100 | 100 | 90 | 100 | 100 |                       |
| Number of species in releve                     | 9   | 7  | 6  | 10  | 10 | 5  | 5   | 7   | 5   | 6   | 5   | 7   | 7  | 7   | 9   |                       |
| Height above the ground, cm                     | 20  | 30 | 20 | –   | 10 | 20 | 20  | 10  | 20  | 20  | –   | 20  | 20 | 20  | 20  |                       |
| Diagnostic species of association               |     |    |    |     |    |    |     |     |     |     |     |     |    |     |     |                       |
| <i>Leptodictyum riparium</i>                    | 5   | 5  | 5  | 5   | 4  | 4  | 4   | 3   | 3   | 3   | 3   | 2   | 2  | 2   | 2   | V                     |
| <i>Leskea polycarpa</i>                         | r   | +  | +  | 1   | 1  | 2  | 2   | 2   | 2   | 2   | 3   | 3   | 4  | 4   | 4   | V                     |
| <i>Brachythecium rivulare</i>                   | +   |    |    | r   |    |    |     |     |     |     |     |     |    |     |     | I                     |
| Diagnostic species of alliance, order and class |     |    |    |     |    |    |     |     |     |     |     |     |    |     |     |                       |
| <i>Lewinskya speciosa</i>                       |     |    |    |     |    |    |     |     |     |     |     |     |    | +   | +   | I                     |
| <i>Pylaisia polyantha</i>                       |     |    |    |     |    |    |     |     | +   | +   | +   |     |    | +   |     | I                     |
| Other species                                   |     |    |    |     |    |    |     |     |     |     |     |     |    |     |     |                       |
| <i>Amblystegium serpens</i>                     |     |    |    | 1   | +  |    | +   | 1   | +   |     |     | +   | 1  | +   | +   | ■                     |
| <i>Anomodon longifolius</i>                     |     |    |    |     |    |    |     |     |     |     |     | +   | +  |     |     | I                     |
| <i>Brachythecium salebrosum</i>                 |     |    |    |     |    |    |     | 1   |     | +   |     | 1   | +  | +   | +   | ■                     |
| <i>Ptychostomum pseudotriquetrum</i>            | r   | r  |    | r   |    |    |     |     | r   |     |     |     |    |     |     | ■                     |
| <i>Calliargon cordifolium</i>                   | +   | +  | +  | +   | +  |    |     |     |     |     |     |     |    |     |     | ■                     |
| <i>Calliegonella lindbergii</i>                 | +   | 1  | 1  |     | 2  |    |     |     |     |     |     |     |    |     | +   | ■                     |
| <i>Ceratodon purpureus</i>                      | r   |    | +  | +   | +  | r  |     |     |     |     |     | +   |    |     |     | ■                     |
| <i>Chiloscyphus polyanthos</i>                  |     |    |    |     | +  |    | +   |     |     |     |     |     |    |     | r   | I                     |
| <i>Drepanocladus aduncus</i>                    |     |    |    | +   | +  |    |     |     |     |     |     |     |    |     |     | I                     |
| <i>Eurhynchiastrum pulchellum</i>               | r   | +  | +  |     |    |    |     |     |     |     |     |     |    |     |     | I                     |
| <i>Fontinalis anthipyretica</i>                 |     |    |    | 1   | +  | +  | +   | +   |     |     |     | r   |    |     |     | ■                     |
| <i>Plagiomnium cuspidatum</i>                   |     |    |    |     |    | +  |     |     |     | +   |     |     |    |     | r   | I                     |
| <i>Pohlia nutans</i>                            |     |    |    | +   | +  |    |     |     |     |     |     |     |    |     |     | I                     |
| <i>Riccia fluitans</i>                          | +   | +  |    |     |    |    |     |     |     |     |     |     |    |     |     | I                     |
| <i>Sanionia uncinata</i>                        |     |    |    |     |    |    |     | r   | +   | 1   | +   | r   |    | r   | r   | ■                     |

Low constancy species: *Callicladium haldanianum* (13–+), *Dichelima falcatum* (11–1).

Table 14. Association *Platygyrietum repentis* Le Blanc ex Marstaller 1986

|  | 1          | 2          | 3         | 4         | 5          | 6          | 7          | 8          | 9          | 10         | 11         | 12       | 13         | 14        | 15         | 16         | 17         | 18         | 19       | 20         | C<br>O<br>N<br>S<br>T |  |
|--|------------|------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|----------|------------|-----------|------------|------------|------------|------------|----------|------------|-----------------------|--|
| Number of releve                                     | 1          | 2          | 3         | 4         | 5          | 6          | 7          | 8          | 9          | 10         | 11         | 12       | 13         | 14        | 15         | 16         | 17         | 18         | 19       | 20         |                       |  |
| Localization of releve                               | 21         | 24         | 25        | 24        | 25         | 25         | 19         | 23         | 19         | 21         | 24         | 19       | 24         | 24        | 13         | 1          | 1          | 13         | 19       | 22         |                       |  |
| Substratum   | TC         | TC         | AP        | AP        | TC         | QR         | TC         | TC         | AP         | TC         | TC         | PA       | TC         | TC        | TC         | TC         | TC         | TC         | PA       | QR         |                       |  |
| Width of the plot, cm                                | 20         | 20         | 30        | 30        | 20         | 20         | 20         | 20         | 20         | 20         | 20         | 40       | 20         | 10        | 20         | 20         | 20         | 20         | 20       | 20         | 20                    |  |
| Length of the plot, cm                               | 100        | 40         | 30        | 50        | 220        | 40         | 90         | 20         | 60         | 120        | 40         | 30       | 80         | 40        | 40         | 110        | 70         | 60         | 30       | 120        |                       |  |
| Cover, %   | 100        | 100        | 90        | 100       | 90         | 90         | 80         | 90         | 80         | 100        | 90         | 80       | 100        | 90        | 90         | 100        | 90         | 80         | 100      | 100        |                       |  |
| Number of species in releve                          | 4          | 6          | 7         | 3         | 4          | 4          | 3          | 4          | 4          | 4          | 5          | 4        | 4          | 5         | 6          | 6          | 6          | 7          | 2        | 4          |                       |  |
| Height above the ground (limits), cm                 | 80–<br>180 | 60–<br>100 | 50–<br>80 | 30–<br>80 | 80–<br>300 | 60–<br>100 | 30–<br>120 | 80–<br>100 | 60–<br>120 | 40–<br>160 | 60–<br>100 | 0–<br>30 | 40–<br>120 | 40–<br>80 | 60–<br>100 | 60–<br>170 | 80–<br>150 | 60–<br>120 | 0–<br>30 | 60–<br>180 |                       |  |
| Diagnostic species of association and subassociation |            |            |           |           |            |            |            |            |            |            |            |          |            |           |            |            |            |            |          |            |                       |  |
| <i>Platygyrium repens</i>                            | 3          | 4          | 4         | 5         | 5          | 5          | 5          | 5          | 5          | 5          | 4          | 4        | 4          | 4         | 4          | 4          | 3          | 2          | 3        | 3          | V                     |  |
| <i>Dicranum montanum</i>                             |            |            |           |           |            | r          | +          | +          | +          | +          | +          | 1        | 1          | 1         | 1          | r          | 2          | 1          | 2        | r          | M                     |  |
| Diagnostic species of alliance, order and class      |            |            |           |           |            |            |            |            |            |            |            |          |            |           |            |            |            |            |          |            |                       |  |
| <i>Ptilidium pulcherrimum</i>                        |            |            |           |           |            |            |            |            |            |            |            |          |            |           | 1          | +          | 1          | 1          |          |            | I                     |  |
| <i>Dicranum scoparium</i>                            |            |            |           |           |            |            |            |            |            |            |            |          |            |           |            | +          | +          | +          |          |            | I                     |  |
| <i>Radula complanata</i>                             | r          | +          | +         |           | +          | r          |            | r          |            | +          | +          |          |            | 2         |            |            |            |            |          | 2          | ■                     |  |
| <i>Lewinskya speciosa</i>                            | 1          |            | +         |           | r          |            |            |            |            | +          | 1          |          | +          |           | +          |            |            |            |          |            | ■                     |  |
| Other species  |            |            |           |           |            |            |            |            |            |            |            |          |            |           |            |            |            |            |          |            |                       |  |
| <i>Jochenia pallescens</i>                           |            | +          |           |           |            |            |            | +          |            |            |            |          |            |           |            |            |            |            |          |            | I                     |  |
| <i>Sciuro-hypnum reflexum</i>                        |            | +          | +         |           |            |            |            |            |            |            |            |          |            | r         | +          | 1          |            |            | r        |            | ■                     |  |
| <i>Brachythecium salebrosum</i>                      |            |            | r         |           |            |            | r          |            |            |            |            | +        |            |           |            |            |            | r          |          |            | I                     |  |
| <i>Pseudoleskeella nervosa</i>                       | 1          | +          | 2         | 1         | +          | +          |            |            |            | 1          | 2          |          | 1          |           |            |            |            |            |          | 1          | ■                     |  |
| <i>Sanionia uncinata</i>                             |            |            | +         |           |            |            |            |            | +          |            |            |          |            | +         | r          | 1          | 2          | r          |          |            | ■                     |  |

Low constancy species: *Amblystegium serpens* (3–r), *Pylaisia polyantha* (13–+), *Neckera pennata* (20–r).

Table 15. Association *Ptilidio pulcherrimi–Hypnetum pallescentis* Barkman ex Wilmanns 1962 subass. *typicum*

|  | 1   | 2   | 3  | 4  | 5   | 6  | 7   | 8  | 9  | 10  | 11 | 12  | 13 | 14  | 15 | 16 | 17 | 18  | 19  | 20 | 21 | 22 | 23 | 24  | 25 | 26  | 27  | C<br>O<br>N<br>S<br>T |   |
|--|-----|-----|----|----|-----|----|-----|----|----|-----|----|-----|----|-----|----|----|----|-----|-----|----|----|----|----|-----|----|-----|-----|-----------------------|---|
| Number of releve                             | 1   | 2   | 3  | 4  | 5   | 6  | 7   | 8  | 9  | 10  | 11 | 12  | 13 | 14  | 15 | 16 | 17 | 18  | 19  | 20 | 21 | 22 | 23 | 24  | 25 | 26  | 27  |                       |   |
| Localization of releve                       | 24  | 6   | 8  | 24 | 11  | 19 | 19  | 8  | 6  | 5   | 25 | 13  | 11 | 6   | 19 | 8  | 14 | 16  | 9   | 16 | 19 | 16 | 1  | 25  | 1  | 25  | 23  |                       |   |
| Substratum                                   | R   | AS  | AS | TC | PA  | PA | R   | PA | PA | AS  | R  | PA  | PA | PA  | PA | R  | PA | R   | PT  | AG | PA | AG | TC | R   | TC | TC  | TC  |                       |   |
| Width of the plot, cm                        | 20  | 30  | 30 | 20 | 30  | 30 | 20  | 40 | 20 | 30  | 20 | 30  | 40 | 30  | 40 | 20 | 30 | 20  | 30  | 20 | 20 | 10 | 20 | 20  | 20 | 20  | 20  |                       |   |
| Length of the plot, cm                       | 100 | 10  | 20 | 30 | 20  | 20 | 80  | 20 | 20 | 25  | 60 | 20  | 30 | 25  | 20 | 50 | 30 | 50  | 30  | 40 | 30 | 20 | 40 | 50  | 40 | 50  | 30  |                       |   |
| Cover, %                                     | 90  | 100 | 90 | 90 | 100 | 95 | 100 | 90 | 80 | 100 | 90 | 100 | 90 | 100 | 90 | 80 | 90 | 100 | 100 | 90 | 90 | 90 | 80 | 100 | 90 | 100 | 100 |                       |   |
| Number of species in releve                  | 6   | 5   | 7  | 6  | 8   | 7  | 7   | 7  | 5  | 7   | 7  | 9   | 7  | 5   | 5  | 4  | 6  | 9   | 7   | 4  | 6  | 6  | 5  | 4   | 3  | 4   | 4   |                       |   |
| Height above the ground, cm                  | –   | 20  | 30 | 40 | 30  | 40 | –   | 40 | 40 | 45  | –  | 40  | 30 | 45  | 40 | –  | 30 | –   | 30  | 80 | 30 | 40 | 40 | –   | 40 | 50  | 30  |                       |   |
| Diagnostic species of association            |     |     |    |    |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     |    |    |    |    |     |    |     |     |                       |   |
| <i>Ptilidium pulcherrimum</i>                |     |     |    |    | r   | +  | 1   | +  | +  | +   | 1  | r   | +  | 1   | 1  | 1  | r  |     |     |    |    |    |    |     |    |     |     | ■                     |   |
| <i>Jochenia pallescens</i>                   | 3   | 3   | 3  | 3  | 3   | 3  | 3   | 3  | 3  | 3   | 3  | 3   | 3  | 4   | 4  | 4  | 4  | 4   | 4   | 4  | 4  | 4  | 4  | 4   | 5  | 5   | 5   | 5                     | V |
| Diagnostic species of union, order and class |     |     |    |    |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     |    |    |    |    |     |    |     |     |                       |   |
| <i>Dicranum montanum</i>                     |     | 1   | 1  | 1  |     | 1  | 2   | 1  | 2  | +   | 1  |     | +  | 2   | 1  |    |    |     |     | 1  | 2  |    |    |     | +  |     |     | ■                     |   |
| <i>Callicladium haldanianum</i>              |     | 1   |    |    |     |    |     |    | +  |     |    |     |    | +   |    |    |    | 1   |     |    | +  | r  |    |     | +  |     |     | ■                     |   |
| <i>Dicranum scoparium</i>                    |     |     |    |    | +   | +  |     |    |    | 1   |    | +   | 1  |     |    |    |    |     |     |    |    | +  |    |     |    |     |     | ■                     |   |
| <i>Pylaisia polyantha</i>                    | 1   |     |    |    |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     | 1  |    | +  | 1  |     |    |     | 1   | I                     |   |
| <i>Radula complanata</i>                     |     |     |    | +  |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     |    | +  |    |    |     |    | r   | r   | I                     |   |
| Other species                                |     |     |    |    |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     |    |    |    |    |     |    |     |     |                       |   |
| <i>Amblystegium serpens</i>                  | 2   |     |    | r  |     | r  |     |    |    |     |    |     |    |     |    |    |    |     |     |    |    |    |    |     |    |     |     | I                     |   |
| <i>Brachythecium salebrosum</i>              | 1   |     |    |    |     | r  |     |    |    |     | +  | +   |    |     |    |    |    | r   | 1   |    | 1  | r  | +  | 1   |    |     | +   | ■                     |   |
| <i>Eurhynchiastrum pulchellum</i>            |     |     | +  |    | 1   | 2  |     | +  |    | +   |    | 1   | 2  |     |    |    |    |     |     |    |    |    |    |     |    |     |     | ■                     |   |
| <i>Hygroamblystegium varium</i>              |     |     |    |    |     |    |     |    |    |     |    |     |    |     |    |    |    |     | r   |    |    |    |    |     |    |     | +   | I                     |   |
| <i>Lepidozia reptans</i>                     |     |     |    |    |     |    |     |    |    |     |    |     |    | r   |    |    |    |     |     |    | r  |    |    |     |    | +   |     | I                     |   |
| <i>Lophocolea heterophylla</i>               |     |     |    |    |     |    |     |    |    |     | 1  | +   |    |     |    | r  |    |     |     |    |    |    |    |     |    |     |     | I                     |   |
| <i>Lophocolea minor</i>                      |     |     |    | r  |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     |    |    |    | +  |     |    |     |     | I                     |   |
| <i>Plagiochila porelloides</i>               |     |     | +  |    |     |    |     | +  |    |     |    |     |    |     |    |    |    |     |     |    |    |    |    |     |    |     |     | I                     |   |
| <i>Plagiomnium cuspidatum</i>                | 2   |     |    |    |     |    |     |    |    |     |    |     |    |     |    |    |    |     |     |    |    |    | 2  |     |    |     |     | I                     |   |
| <i>Plagiothecium laetum</i>                  |     |     | 2  |    | 1   | 1  |     | 1  |    | 1   | +  | 3   | 3  |     | +  |    | 1  |     |     |    |    |    |    |     |    |     |     | ■                     |   |
| <i>Plagiothecium denticulatum</i>            |     |     | +  |    | +   |    |     | 2  |    |     |    |     |    |     |    |    |    |     |     |    |    |    |    |     |    |     |     | I                     |   |
| <i>Pleurozium schreberi</i>                  |     |     | r  |    |     |    | +   |    |    | +   |    | 1   |    |     | +  |    | +  | +   |     |    |    |    |    |     |    |     |     | ■                     |   |
| <i>Sanionia uncinata</i>                     |     | 1   |    |    |     |    | 2   |    | +  |     | +  |     | r  | r   |    | 1  | +  | +   |     | +  | +  | 2  |    |     |    |     |     | ■                     |   |
| <i>Sciuro-hypnum reflexum</i>                |     | +   |    | +  | 1   |    |     |    |    |     |    | 1   |    |     |    |    | r  |     | +   |    |    |    |    |     |    |     |     | ■                     |   |

Low constancy species: *Chiloscyphus pallescens* (18–+), *Dicranella heteromalla* (7–r), *Dicranum viride* (4–1), *Pseudoleskeella nervosa* (1, 26–+), *Mnium stellare* (18,22–r), *Neckera pennata* (19–1), *Lewinskya speciosa* (19–+), *Platygyrium repens* (26–1), *Pohlia nutans* (18–r), *Rhizomnium punctatum* (5–+).

Table 16. Association *Ptilidio pulcherrimi–Hypnetum pallescentis* Barkman ex Wilmanns 1962 subass. *callicladietosum haldanianae* Baisheva 1995

|  | 1   | 2   | 3  | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14 | 15 | 16  | 17 | 18 | 19  | 20  | 21  | 22  | 23 | C<br>O<br>N<br>S<br>T |
|--|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|----|----|-----|-----|-----|-----|----|-----------------------|
| Number of releve                                     | 1   | 2   | 3  | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14 | 15 | 16  | 17 | 18 | 19  | 20  | 21  | 22  | 23 |                       |
| Localization of releve                               | 3   | 3   | 1  | 8   | 14  | 14  | 7   | 25  | 2   | 9   | 18  | 24  | 6   | 6  | 2  | 6   | 16 | 16 | 16  | 19  | 19  | 12  | 14 |                       |
| Substratum   | R   | R   | TC | PT  | R   | R   | R   | R   | PA  | BP  | R   | R   | R   | AS | AS | R   | QR | AG | R   | R   | R   | R   | PA |                       |
| Width of the plot, cm                                | 20  | 20  | 30 | 20  | 20  | 20  | 40  | 30  | 30  | 40  | 30  | 20  | 20  | 20 | 20 | 20  | 40 | 40 | 20  | 30  | 30  | 30  | 40 |                       |
| Length of the plot, cm                               | 40  | 50  | 30 | 20  | 150 | 50  | 200 | 70  | 20  | 30  | 50  | 120 | 50  | 20 | 20 | 30  | 15 | 20 | 120 | 60  | 60  | 80  | 20 |                       |
| Cover, %   | 100 | 100 | 90 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 90 | 90 | 100 | 90 | 90 | 100 | 100 | 100 | 100 | 90 |                       |
| Number of species in releve                          | 10  | 8   | 8  | 6   | 11  | 5   | 10  | 6   | 5   | 6   | 4   | 8   | 7   | 6  | 6  | 8   | 7  | 8  | 10  | 6   | 6   | 8   | 3  |                       |
| Height above the ground, cm                          | –   | –   | 30 | 40  | –   | –   | –   | –   | 20  | 30  | –   | –   | –   | 20 | 20 | –   | 50 | 20 | –   | –   | –   | –   | 20 |                       |
| Diagnostic species of association and subassociation |     |     |    |     |     |     |     |     |     |     |     |     |     |    |    |     |    |    |     |     |     |     |    |                       |
| <i>Callicladium haldanianum</i>                      | 2   | 2   | 3  | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 3   | 3   | 3  | 3  | 3   | 3  | 3  | 4   | 4   | 4   | 5   | 5  | V                     |
| <i>Jochenia pallescens</i>                           |     |     |    |     |     |     |     |     | +   | 2   | 2   | 2   | 2   | r  | +  | 1   | 1  | r  | +   |     |     |     |    | ■                     |
| <i>Ptilidium pulcherrimum</i>                        |     |     |    |     |     |     | +   |     |     |     |     |     | r   |    | +  | +   | 1  |    |     |     |     |     |    | ■                     |
| Diagnostic species of order <i>Dicranetalia</i>      |     |     |    |     |     |     |     |     |     |     |     |     |     |    |    |     |    |    |     |     |     |     |    |                       |
| <i>Dicranum montanum</i>                             |     |     |    |     | +   | r   | 1   | 1   | 1   | r   | 1   | 1   | 1   | 1  | 3  |     |    |    |     |     |     |     |    | ■                     |
| <i>Dicranum scoparium</i>                            |     |     |    |     | +   |     | +   |     |     |     |     | 1   |     |    |    | +   |    |    | 1   | 1   |     | +   |    | ■                     |
| Other species  |     |     |    |     |     |     |     |     |     |     |     |     |     |    |    |     |    |    |     |     |     |     |    |                       |
| <i>Amblystegium serpens</i>                          |     |     |    | r   | r   | +   |     |     |     |     |     |     | r   | +  |    | 1   | +  | r  |     |     | 1   |     |    | ■                     |
| <i>Brachythecium salebrosum</i>                      |     |     |    | +   |     |     |     |     |     |     |     |     |     |    |    |     |    | +  | r   |     | 1   | 1   |    | ■                     |
| <i>Campylophyllopsis sommerfeltii</i>                | +   | +   |    | r   | r   | +   |     |     |     |     |     |     |     |    |    |     |    |    |     |     | r   |     |    | ■                     |
| <i>Chiloscyphus pallescens</i>                       |     |     |    | r   |     |     |     |     |     |     |     |     |     |    |    |     |    |    | +   |     |     | r   |    | ■                     |
| <i>Dicranum polysetum</i>                            | 1   | 2   |    |     |     |     |     |     |     |     |     |     |     |    |    |     |    |    |     |     |     |     |    | ■                     |
| <i>Eurhynchiastrum pulchellum</i>                    | 2   | 2   |    |     |     |     |     |     | +   |     |     |     |     |    |    |     |    |    |     |     |     |     | r  | ■                     |
| <i>Lophocolea heterophylla</i>                       | +   |     |    |     | r   |     | +   |     |     | r   |     | +   |     |    | r  |     |    |    | r   |     |     | r   |    | ■                     |
| <i>Plagiochila porelloides</i>                       |     |     |    | r   | 1   | +   |     |     |     |     |     | +   |     |    |    |     |    |    |     |     |     |     |    | ■                     |
| <i>Plagomnium cuspidatum</i>                         |     |     |    | 2   | 1   | 1   | 1   | 1   |     |     | r   |     |     |    |    |     | 1  |    |     | 1   | +   |     |    | ■                     |
| <i>Plagiothecium laetum</i>                          | +   | +   |    |     |     | 1   |     | r   |     |     |     |     |     |    | r  |     | +  |    | r   |     | +   |     |    | ■                     |
| <i>Pleurozium schreberi</i>                          |     |     |    |     | 1   |     |     |     |     | +   |     | 1   |     |    |    | +   |    |    | +   | +   | r   |     | r  | ■                     |
| <i>Sanionia uncinata</i>                             | +   | +   | 1  | 1   |     | 2   |     | 1   |     |     |     |     | 1   | 2  |    | 2   | r  |    | 2   |     |     |     |    | ■                     |
| <i>Sciuro-hypnum reflexum</i>                        |     |     |    | r   | +   |     | +   |     |     | 1   |     |     | r   | +  |    |     |    |    |     |     |     |     |    | ■                     |
| <i>Tetraphis pellucida</i>                           |     |     |    |     |     | 1   |     | +   |     |     |     |     |     |    |    |     |    |    |     | r   |     |     |    | ■                     |

Low constancy species: *Atrichum undulatum* (8–r), *Blepharostoma trichophyllum* (1–r; 2–r), *Brachytheciastrum velutinum*, (22–+), *Ceratodon purpureus* (10–+), *Climacium dendroides* (4–1), *Dicranella heteromalla* (8–+), *Hylocomium splendens* (20–+), *Calliergonella lindbergii* (7–+), *Hylocomiadelphus triquetrus* (4–2), *Oncophorus wahlenbergii* (1–+, 2–r), *Plagiothecium cavifolium* (18–1), *P. denticulatum* (10–r, 18–1), *Platygyrium repens* (12–r), *Ptilium crista-castrensis* (16–r), *Pylaisia polyantha* (18–r), *Pohlia nutans* (1–1, 18–1, 22–r), *Sciuro-hypnum curtum* (5–1), *S. starkei* (19–r).

Table 17. Association *Orthodicrano–Plagiothecietum laeti* Baisheva & al. 1994 subass. *typicum*

|   | 1  | 2  | 3  | 4  | 5  | 6  | 7   | 8   | 9  | 10 | 11 | 12  | 13 | 14 | 15 | 16 | 17 | 18  | 19 | 20 | 21 | 22 | 23  | 24  | 25 | 26  | 27  | C<br>O<br>N<br>S<br>T |  |
|---|----|----|----|----|----|----|-----|-----|----|----|----|-----|----|----|----|----|----|-----|----|----|----|----|-----|-----|----|-----|-----|-----------------------|--|
| Numberofreleve                                  | 1  | 2  | 3  | 4  | 5  | 6  | 7   | 8   | 9  | 10 | 11 | 12  | 13 | 14 | 15 | 16 | 17 | 18  | 19 | 20 | 21 | 22 | 23  | 24  | 25 | 26  | 27  |                       |  |
| Localization of releve                          | 8  | 7  | 16 | 3  | 8  | 3  | 1   | 13  | 13 | 14 | 25 | 1   | 1  | 13 | 9  | 3  | 9  | 14  | 23 | 7  | 9  | 13 | 1   | 19  | 19 | 6   | 1   |                       |  |
| Substratum                                      | PA | PA | PS | PA | PA | PA | AS  | PA  | PA | PA | BP | PA  | AS | BP | PT | PS | BP | PA  | BP | AS | PA | BP | PA  | TC  | BP | AS  | AS  |                       |  |
| Width of the plot, cm                           | 20 | 50 | 30 | 50 | 30 | 40 | 20  | 40  | 20 | 30 | 20 | 30  | 40 | 30 | 40 | 40 | 30 | 20  | 30 | 50 | 40 | 30 | 40  | 20  | 30 | 30  | 40  |                       |  |
| Length of the plot, cm                          | 20 | 20 | 20 | 40 | 40 | 40 | 20  | 35  | 20 | 35 | 40 | 30  | 20 | 20 | 20 | 20 | 30 | 20  | 30 | 20 | 40 | 40 | 40  | 40  | 60 | 40  | 20  |                       |  |
| Cover, %  | 80 | 90 | 70 | 80 | 80 | 90 | 100 | 100 | 90 | 80 | 90 | 100 | 80 | 80 | 70 | 60 | 80 | 100 | 90 | 80 | 80 | 80 | 100 | 100 | 90 | 100 | 100 |                       |  |
| Number of species in releve                     | 6  | 6  | 5  | 7  | 6  | 7  | 7   | 6   | 5  | 6  | 6  | 7   | 4  | 5  | 6  | 5  | 9  | 3   | 5  | 6  | 9  | 4  | 5   | 4   | 5  | 6   | 5   |                       |  |
| Height above the ground, cm                     | 20 | 20 | 20 | 40 | 40 | 40 | 20  | 35  | 20 | 35 | 40 | 30  | 20 | 20 | 20 | 20 | 30 | 20  | 30 | 20 | 40 | 40 | 40  | 40  | 60 | 40  | 20  |                       |  |
| Diagnostic species of association               |    |    |    |    |    |    |     |     |    |    |    |     |    |    |    |    |    |     |    |    |    |    |     |     |    |     |     |                       |  |
| <i>Dicranum montanum</i>                        |    |    |    | +  |    |    | 2   | 2   | 3  | 3  | 3  | 3   | 3  | 3  | 3  | 3  | 3  | 4   | 4  | 5  | 4  | 4  | 4   | 4   | 5  | 5   | 5   | V                     |  |
| <i>Plagiothecium laetum</i>                     | 5  | 5  | 5  | 4  | 3  | 3  | 4   | 3   | 3  | 3  | 3  | 3   | 3  | 3  | 3  | 3  | 2  | 2   | 2  | 2  | 2  |    |     |     | +  |     |     | V                     |  |
| Diagnostic species of order <i>Dicranetalia</i> |    |    |    |    |    |    |     |     |    |    |    |     |    |    |    |    |    |     |    |    |    |    |     |     |    |     |     |                       |  |
| <i>Ptilidium pulcherrimum</i>                   | r  | 1  |    | 1  |    | +  |     |     |    | r  |    | 1   | +  | 1  | +  |    | +  | 1   | +  | +  | +  | 1  |     | +   |    |     | +   | V                     |  |
| <i>Dicranum scoparium</i>                       |    | r  |    | +  |    | 1  | +   | 1   | +  |    |    |     |    | 1  |    | 1  |    |     |    | +  |    | 1  | +   |     |    |     | +   | ■                     |  |
| <i>Jochenia pallescens</i>                      | 1  |    |    | r  |    |    |     |     |    |    |    |     |    |    |    |    |    |     |    |    | r  |    |     |     | +  | 1   |     | I                     |  |
| Diagnostic species of class                     |    |    |    |    |    |    |     |     |    |    |    |     |    |    |    |    |    |     |    |    |    |    |     |     |    |     |     |                       |  |
| <i>Lophocolea heterophylla</i>                  |    |    | +  |    |    | +  | +   |     |    |    | +  | +   |    |    |    |    |    |     |    |    | r  |    |     |     | r  |     |     | ■                     |  |
| <i>Plagiothecium denticulatum</i>               |    | +  |    |    |    |    |     |     |    | r  |    |     |    |    |    |    |    |     |    |    |    |    | 2   |     |    |     |     | I                     |  |
| <i>Tetraphis pellucida</i>                      |    |    |    |    |    |    |     |     |    |    |    |     |    | r  |    | +  | r  |     |    |    |    |    |     |     |    |     | +   | I                     |  |
| Other species                                   |    |    |    |    |    |    |     |     |    |    |    |     |    |    |    |    |    |     |    |    |    |    |     |     |    |     |     |                       |  |
| <i>Amblystegium serpens</i>                     |    |    |    |    |    |    |     |     |    |    | 1  |     |    |    |    |    |    |     |    |    |    |    |     |     |    | +   |     | I                     |  |
| <i>Blepharostoma trichophyllum</i>              |    |    |    |    |    |    |     |     |    |    |    |     |    |    |    | r  | r  |     |    |    |    |    |     |     |    |     |     | I                     |  |
| <i>Sciuro–hypnum reflexum</i>                   | +  |    |    |    | +  | +  |     |     |    |    |    |     | +  | r  | r  |    |    |     | 1  |    | 1  |    | +   | r   | +  |     | ■   |                       |  |
| <i>Brachythecium salebrosum</i>                 |    |    |    |    |    |    |     | 1   |    | +  | 1  | +   |    |    |    |    |    |     |    |    |    |    |     | 1   |    |     |     | I                     |  |
| <i>Callicladium haldanianum</i>                 |    |    | 1  |    |    |    |     |     |    |    |    |     |    |    |    |    |    |     |    |    |    | +  |     |     | +  |     |     | I                     |  |
| <i>Eurhynchiastrum pulchellum</i>               | 1  |    |    | 1  | 2  | +  | 1   |     |    |    |    |     |    |    |    |    | +  |     |    | r  |    | 2  | 1   |     |    | 1   | ■   |                       |  |
| <i>Plagiomnium cuspidatum</i>                   | +  |    |    |    | +  |    |     |     |    | +  | 1  |     |    |    |    |    |    |     |    |    |    |    |     | 2   |    |     |     | ■                     |  |
| <i>Pleurozium schreberi</i>                     |    | 1  |    | +  |    | 3  | r   | +   |    |    |    |     |    |    | r  |    |    |     |    |    |    | +  |     |     |    |     |     | ■                     |  |
| <i>Sanonia uncinata</i>                         |    |    |    |    |    |    |     |     |    |    |    | 1   |    |    | +  | +  |    |     |    |    | 3  |    |     |     |    | 1   |     | I                     |  |

Lowconstancyspecies: *Sciuro–hypnum oedipodium* (21+), *S. starkei* (2–1), *Brachytheciastrum velutinum* (3–1), *Plagiochila porelloides* (17+), *Pseudoamblystegium subtile* (3–r), *Pohlia nutans* (17–1), *Pylaisia polyantha* (8–r), *Rhizomnium pseudopunctatum* (5–2).

Table 18. Association *Orthodicrano–Plagiothecietum laeti* Baisheva & al. 1994 subass. *eurhynchietosum pulchelli* (Anishchenko 2001 prov.) comb. nov.

|  | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13 | 14     | 15     | 16     | 17     | 18 | 19     | C<br>O<br>N<br>S<br>T |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|--------|--------|--------|--------|----|--------|-----------------------|
| Number of releve                                     | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13 | 14     | 15     | 16     | 17     | 18 | 19     |                       |
| Localization of releve                               | 14     | 13     | 1      | 1      | 13     | 1      | 13     | 13     | 5      | 5      | 9      | 7      | 8  | 19     | 3      | 24     | 19     | 24 | 18     |                       |
| Substratum   | P<br>A | B<br>P | A<br>S | A<br>S | B<br>P | B<br>P | A<br>S | A<br>S | P<br>A | B<br>P | T<br>C | P<br>A | R  | P<br>A | T<br>C | T<br>C | P<br>S | PT | B<br>P |                       |
| Width of the plot, cm                                | 30     | 20     | 30     | 40     | 30     | 30     | 40     | 30     | 20     | 20     | 30     | 30     | 20 | 20     | 20     | 20     | 30     | 20 | 20     |                       |
| Length of the plot, cm                               | 30     | 40     | 20     | 20     | 40     | 20     | 20     | 40     | 35     | 40     | 40     | 40     | 40 | 30     | 20     | 20     | 30     | 20 | 40     |                       |
| Cover, %   | 90     | 80     | 0      | 0      | 90     | 0      | 0      | 80     | 90     | 90     | 0      | 90     | 0  | 0      | 0      | 0      | 0      | 0  | 0      | 90                    |
| Number of species in releve                          | 6      | 6      | 7      | 7      | 5      | 5      | 4      | 5      | 7      | 6      | 6      | 7      | 5  | 3      | 7      | 3      | 7      | 5  | 4      |                       |
| Height above the ground, cm                          | 30     | 40     | 20     | 20     | 40     | 20     | 20     | 40     | 35     | 40     | 40     | 40     | –  | 30     | 30     | 20     | 30     | 20 | 40     |                       |
| Diagnostic species of association                    |        |        |        |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    |        |                       |
| <i>Eurhynchiastrum pulchellum</i>                    | 4      | 4      | 3      | 4      | 4      | 5      | 5      | 5      | 2      | 4      | 3      | 5      | 5  | 5      | 5      | 4      | 4      | 4  | 3      | V                     |
| Diagnostic species of order <i>Dicranetalia</i>      |        |        |        |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    |        |                       |
| <i>Dicranum montanum</i>                             |        |        | r      | 2      | 1      | +      | +      | +      | 3      | +      | r      | +      |    |        |        |        |        |    |        | ■                     |
| <i>Dicranum scoparium</i>                            | 1      | 1      | r      | +      | 1      | +      |        |        |        |        |        |        |    |        |        |        |        |    |        | ■                     |
| <i>Plagiothecium laetum</i>                          |        |        | 1      | +      | 1      | 1      | 1      | r      | 2      |        |        |        |    |        |        |        |        |    |        | ■                     |
| <i>Ptilidium pulcherrimum</i>                        |        | 1      |        | +      | +      | r      | r      |        |        |        |        |        |    | +      |        |        |        |    |        | ■                     |
| Diagnostic species of order <i>Brachythecietalia</i> |        |        |        |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    |        |                       |
| <i>Amblystegium serpens</i>                          |        |        |        |        |        |        |        |        | r      |        |        |        |    |        | r      |        | r      | +  |        | ■                     |
| <i>Sciuro–hypnum reflexum</i>                        | 2      |        |        | r      |        |        |        |        |        | 1      |        | +      |    |        | r      |        |        |    |        | ■                     |
| <i>Brachythecium salebrosum</i>                      | +      |        |        |        |        |        |        |        |        |        | +      |        |    |        |        |        |        |    |        | ■                     |
| Other species  |        |        |        |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    |        |                       |
| <i>Blepharostoma trichophyllum</i>                   |        |        |        |        |        |        |        |        |        |        |        | +      | +  |        |        |        |        |    |        | ■                     |
| <i>Jochenia pallescens</i>                           |        |        |        |        |        |        |        |        |        |        |        |        |    |        |        | 2      | 1      |    |        | ■                     |
| <i>Lophocolea heterophylla</i>                       |        |        | +      |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    | +      | ■                     |
| <i>Lophocolea minor</i>                              |        |        |        |        |        |        |        |        |        |        |        | 1      | +  |        |        |        |        |    |        | ■                     |
| <i>Tetraphis pellucida</i>                           |        |        |        | +      |        |        |        |        |        |        |        |        | +  |        |        |        |        |    |        | ■                     |
| <i>Calliergon cordifolium</i>                        |        |        |        |        |        |        |        |        |        |        |        |        |    |        |        |        |        | 1  | +      | ■                     |
| <i>Mnium stellare</i>                                |        |        |        |        |        |        |        |        |        |        | 3      |        |    | 1      |        |        |        | 1  |        | ■                     |
| <i>Plagiochila porelloides</i>                       |        |        |        |        |        |        |        | r      | +      |        | +      |        |    |        |        |        |        |    |        | ■                     |
| <i>Plagiomnium cuspidatum</i>                        |        |        |        |        |        |        |        | +      | +      | +      |        |        |    |        | +      |        |        |    | 2      | ■                     |
| <i>Pleurozium schreberi</i>                          |        | +      | +      |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    |        | ■                     |
| <i>Pohlia nutans</i>                                 | r      | 1      |        |        |        |        |        |        |        |        |        |        |    |        |        |        |        |    | 1      | ■                     |
| <i>Rhodobryum roseum</i>                             |        |        | +      |        |        |        |        |        |        |        |        |        |    |        | +      |        |        |    |        | ■                     |
| <i>Sanionia uncinata</i>                             |        |        |        |        |        |        |        |        |        | +      | +      |        |    |        |        | +      |        |    |        | ■                     |

Low constancy species: *Anomodon viticulosus* (17–+); *Callicladium haldanianum* (18–1); *Pseudoleskeella nervosa* (17–+); *Lepidozia reptans* (12–+); *Plagiothecium denticulatum* (1–+, 15–+); *Pylaisia polyantha* (18–r); *Radula complanata* (9–+; 15–r); *Rhizomnium punctatum* (13–1); *Sciuro–hypnum oedipodium* (13–+).

Table 19. Association *Plagiothecium cavifolii* Marstaller 1984

|  | 1  | 2  | 3   | 4  | 5  | 6  | 7   | 8   | 9   | 10  | 11 | 12  | 13 | 14 | 15  | C<br>O<br>N<br>S<br>T |
|--|----|----|-----|----|----|----|-----|-----|-----|-----|----|-----|----|----|-----|-----------------------|
| Number of releve                         | 1  | 2  | 3   | 4  | 5  | 6  | 7   | 8   | 9   | 10  | 11 | 12  | 13 | 14 | 15  |                       |
| Localization of releve                   | 14 | 14 | 11  | 7  | 10 | 15 | 15  | 11  | 5   | 14  | 10 | 15  | 11 | 14 | 15  |                       |
| Substratum                               | S  | S  | S   | S  | S  | S  | S   | PA  | PA  | S   | S  | S   | S  | S  | PA  |                       |
| Width of the plot, cm                    | 50 | 30 | 100 | 80 | 60 | 50 | 40  | 20  | 30  | 50  | 90 | 100 | 50 | 50 | 20  |                       |
| Length of the plot, cm                   | 40 | 60 | 70  | 60 | 40 | 50 | 60  | 30  | 20  | 50  | 40 | 70  | 50 | 50 | 30  |                       |
| Cover, %                                 | 90 | 90 | 80  | 80 | 90 | 90 | 100 | 100 | 100 | 100 | 80 | 80  | 90 | 90 | 100 |                       |
| Number of species in releve              | 5  | 4  | 5   | 6  | 8  | 6  | 6   | 5   | 9   | 9   | 6  | 7   | 3  | 8  | 6   |                       |
| Height above the ground, cm              | —  | —  | —   | —  | —  | —  | —   | 30  | 20  | —   | —  | —   | —  | —  | 30  |                       |
| Diagnostic species of association        |    |    |     |    |    |    |     |     |     |     |    |     |    |    |     |                       |
| <i>Plagiothecium cavifolium</i>          | 5  | 5  | 5   | 5  | 5  | 4  | 4   | 4   | 4   | 3   | 3  | 3   | 4  | 4  | 4   | V                     |
| Diagnostic species of alliance and order |    |    |     |    |    |    |     |     |     |     |    |     |    |    |     |                       |
| <i>Dicranella heteromalla</i>            |    |    |     |    |    |    |     | +   | 1   | 1   | 1  |     |    |    |     | I                     |
| <i>Atrichum undulatum</i>                | +  |    |     |    |    |    |     |     | +   |     |    |     | 1  |    | +   | I                     |
| <i>Pohlia cruda</i>                      |    |    |     |    |    |    |     |     |     |     |    |     |    |    |     | I                     |
| Diagnostic species of class              |    |    |     |    |    |    |     |     |     |     |    |     |    |    |     |                       |
| <i>Lophocolea heterophylla</i>           |    |    |     | +  | r  | +  |     |     | +   | +   | +  | +   |    |    |     | I                     |
| <i>Plagiothecium denticulatum</i>        | 1  | +  | +   | +  | 1  | 2  | 1   | 2   | 2   | 2   | 3  | 3   | 2  |    |     | V                     |
| <i>Plagiothecium laetum</i>              |    |    |     |    | +  | +  | +   |     |     |     | +  | +   |    | 1  | 2   | I                     |
| Other species                            |    |    |     |    |    |    |     |     |     |     |    |     |    |    |     |                       |
| <i>Amblystegium serpens</i>              |    |    | r   |    |    |    |     |     |     |     |    | r   | r  | r  |     | I                     |
| <i>Brachythecium salebrosum</i>          | +  |    |     |    |    |    |     |     |     |     |    |     |    |    |     | I                     |
| <i>Cephaloziella divaricata</i>          |    |    |     |    |    |    |     |     |     | r   |    |     |    |    |     | I                     |
| <i>Ceratodon purpureus</i>               |    |    | +   | +  | +  |    |     | 1   | +   |     |    |     |    |    | r   | I                     |
| <i>Chiloscyphus polyanthos</i>           | +  |    |     |    |    |    |     |     |     |     |    |     |    |    |     | I                     |
| <i>Dicranum polysetum</i>                |    |    | +   | +  |    |    |     |     |     |     |    |     |    | +  |     | I                     |
| <i>Dicranum scoparium</i>                |    | 1  |     |    | +  | +  |     |     | +   |     | +  | +   |    | +  | 1   | I                     |
| <i>Pleurozium schreberi</i>              |    | 1  |     | +  | +  | 1  | +   | +   | +   | +   |    |     |    | 2  |     | I                     |
| <i>Pohlia nutans</i>                     |    |    |     |    |    |    | 2   |     | +   | 2   |    |     |    | 1  | 1   | I                     |
| <i>Polytrichum juniperinum</i>           |    |    |     |    |    |    |     |     | +   | +   |    | +   |    | +  |     | I                     |

Table 20. Association *Pohlietum nutantis* ass. nov.

|   | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | C<br>O<br>N<br>S<br>T |  |
|---|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------------|--|
| Number of releve  | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |                       |  |
| Localization of releve  | 16  | 16 | 16 | 2  | 13 | 25 | 2  | 25 | 19 | 14 | 16 | 16 | 19 | 19 | 16 | 11 | 18 | 13 | 18 | 18 |                       |  |
| Substratum  | R   | R  | R  | R  | BP | R  | R  | R  | R  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S                     |  |
| Width of the plot, cm   | 20  | 30 | 30 | 30 | 20 | 20 | 30 | 30 | 20 | 20 | 30 | 40 | 50 | 50 | 40 | 50 | 50 | 50 | 60 | 60 |                       |  |
| Length of the plot, cm  | 20  | 30 | 30 | 20 | 20 | 30 | 20 | 20 | 30 | 80 | 40 | 20 | 40 | 50 | 60 | 40 | 50 | 50 | 30 | 40 |                       |  |
| Cover, %  | 100 | 90 | 0  | 0  | 90 | 90 | 0  | 90 | 0  | 70 | 80 | 70 | 80 | 90 | 80 | 70 | 70 | 70 | 80 | 60 |                       |  |
| Number of species in releve   | 7   | 7  | 7  | 5  | 4  | 4  | 9  | 8  | 8  | 10 | 7  | 6  | 7  | 7  | 8  | 7  | 7  | 7  | 7  | 7  |                       |  |
| Height above the ground, cm   | 30  | 30 | -  | -  | 20 | -  | -  | 20 | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |                       |  |
| Diagnostic species of association   |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |  |
| <i>Pohlia nutans</i>  | 3   | 4  | 4  | 4  | 5  | 5  | 3  | 3  | 3  | 4  | 4  | 3  | 2  | 2  | 3  | 3  | 3  | 4  | 4  | 5  | V                     |  |
| <i>Polytrichum juniperinum</i>  |     |    |    |    |    |    |    | +  | +  | 2  | 2  | 3  | 4  | 4  | 3  | 3  | 3  | 1  | 1  | 1  | IV                    |  |
| <i>Cephaloziella divaricata</i>   | +   |    |    |    |    |    |    |    |    | +  | r  | +  | r  | r  | +  | +  | +  | +  | +  | +  | IV                    |  |
| Diagnostic species of suballiance, alliance, order and class <i>Cladonio-Lepidozietea reptantis</i> |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |  |
| <i>Plagiothecium laetum</i>   |     |    | +  | +  | +  | +  | 1  | 2  | 2  | 1  | r  | r  | +  |    |    |    |    |    |    |    | ■                     |  |
| <i>Lophocolea heterophylla</i>  | 1   | +  | +  | +  |    |    | +  |    | +  | r  | 1  |    |    |    | +  | +  |    |    | +  | +  | ■                     |  |
| <i>Atrichum undulatum</i>   |     |    |    |    |    |    |    |    |    | +  |    |    |    | 1  | +  |    |    |    | 1  |    | ■                     |  |
| <i>Isopaches bicrenatus</i>   |     |    |    |    |    |    |    |    |    | +  |    |    |    |    | +  |    | +  |    |    |    | ■                     |  |
| <i>Plagiothecium denticulatum</i>   |     | +  |    |    |    |    |    |    |    |    |    |    |    |    | +  |    |    |    |    |    | ■                     |  |
| <i>Pogonatum urnigerum</i>  |     |    |    |    |    |    |    | +  |    |    |    |    |    |    |    |    |    |    | +  |    | ■                     |  |
| Other species   |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |  |
| <i>Amblystegium serpens</i>   |     |    |    |    |    |    |    | +  |    |    |    |    |    | +  |    |    |    |    |    |    | ■                     |  |
| <i>Brachythecium salebrosum</i>   |     | +  |    |    |    |    |    | r  |    |    |    |    |    |    |    |    |    |    | r  |    | ■                     |  |
| <i>Callicladium haldanianum</i>   |     |    | r  |    |    |    |    |    | 1  |    |    |    |    |    |    |    |    |    |    |    | ■                     |  |
| <i>Ceratodon purpureus</i>  |     | r  |    |    |    |    |    |    | r  | +  | 1  |    |    |    |    | r  |    |    |    | +  | ■                     |  |
| <i>Dicranum montanum</i>  | 3   | r  |    |    | 1  | +  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ■                     |  |
| <i>Dicranum polysetum</i>   |     |    |    |    |    |    |    |    |    |    |    |    |    | +  | +  | +  | +  |    |    | 1  | ■                     |  |
| <i>Dicranum scoparium</i>   | +   |    | +  |    |    |    |    |    | +  | 1  |    |    | +  |    |    |    |    | +  | +  |    | ■                     |  |
| <i>Jochenia pallescens</i>  | r   |    | 1  |    |    |    |    | r  |    |    |    |    |    |    |    |    |    |    |    |    | ■                     |  |
| <i>Pleurozium schreberi</i>   |     |    |    |    |    |    |    |    |    | r  |    |    | 1  | 1  |    |    |    | 1  | 1  | +  | ■                     |  |
| <i>Ptilidium pulcherrimum</i>   | 1   | +  |    |    |    |    |    | +  | +  | 1  |    |    |    |    |    |    |    | +  | +  |    | ■                     |  |
| <i>Tetraphis pellucida</i>  |     |    |    |    | +  | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    | ■                     |  |

Low constancy species: *Sciuro-hypnum curum* (3-1); *Brachythecium velutinum* (7-+); *Campylophyllopsis sommerfeltii* (7-r); *Dicranella cerviculata* (11-+); *Dicranum lagellare* (18-2); *Leptobryum piriforme* (4-+); *Mnium stellare* (7-1); *Oncophorus wahlenbergii* (7-r); *Ptilidium ciliare* (12-+); *Rhizomnium punctatum* (7-+).

Table 21. Association *Atricheto undulati–Dicranelletum heteromalli* ass. nov.

|  | 1   | 2   | 3  | 4  | 5  | 6  | 7! | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | C<br>O<br>N<br>S<br>T |
|--|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------------|
| Number of releve                               | 1   | 2   | 3  | 4  | 5  | 6  | 7! | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |                       |
| Localization of releve                         | 14  | 18  | 18 | 11 | 18 | 11 | 11 | 11 | 18 | 18 | 14 | 14 | 14 | 14 | 14 |                       |
| Substratum                                     | S   | S   | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |                       |
| Width of the plot, cm                          | 50  | 50  | 50 | 50 | 50 | 30 | 30 | 50 | 50 | 50 | 20 | 50 | 20 | 30 | 50 |                       |
| Length of the plot, cm                         | 100 | 60  | 50 | 50 | 40 | 40 | 40 | 50 | 60 | 50 | 40 | 20 | 40 | 40 | 60 |                       |
| Cover, %                                       | 90  | 100 | 90 | 80 | 90 | 70 | 70 | 90 | 80 | 70 | 80 | 80 | 90 | 80 | 90 |                       |
| Number of species in releve                    | 5   | 6   | 6  | 6  | 8  | 4  | 4  | 8  | 6  | 6  | 6  | 6  | 6  | 6  | 6  |                       |
| Diagnostic species of association              |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Dicranella heteromalla</i>                  | 4   | 4   | 4  | 5  | 5  | 5  | 4  | 3  | 3  | 2  | 3  | 4  | 4  | 3  | 5  | V                     |
| <i>Atrichum undulatum</i>                      |     |     |    | +  | +  | 1  | 1  | +  | +  | 2  | 1  | 1  |    |    |    | ■                     |
| <i>Pohlia nutans</i>                           | +   | 2   | 2  | 2  | 1  | +  | 1  | 3  |    |    |    |    |    |    |    | ■                     |
| Diagnostic species of suballiance and alliance |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Calypogeia muelleriana</i>                  | 2   |     |    | +  |    |    |    |    | +  | +  | +  |    | 1  | +  | 1  | ■                     |
| <i>Cephalozia bicuspidata</i>                  | r   | r   | +  |    |    |    |    |    |    |    | +  |    |    |    |    | ■                     |
| <i>Polytrichum commune</i>                     |     |     | +  |    | 1  |    |    |    | +  | 1  |    |    | +  | 1  |    | ■                     |
| <i>Polytrichum juniperinum</i>                 |     |     |    |    | +  |    |    | 2  |    |    |    | 1  |    |    | 1  | ■                     |
| <i>Polytrichum formosum</i>                    |     |     |    | 1  |    | +  |    |    |    |    |    | +  |    |    |    | ■                     |
| <i>Isopaches bicrenatus</i>                    |     |     | r  |    |    |    |    | r  |    |    |    |    |    |    |    | ■                     |
| Diagnostic species of order and class          |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Pohlia cruda</i>                            |     |     |    |    |    |    |    |    |    |    | 2  |    | 2  | 3  | +  | ■                     |
| <i>Cephalozia divaricata</i>                   |     |     | +  |    |    |    |    | +  |    |    |    |    |    |    |    | ■                     |
| <i>Lophocolea heterophylla</i>                 |     |     |    |    |    |    |    | +  |    |    |    | +  |    |    |    | ■                     |
| <i>Lepidozia reptans</i>                       |     |     |    |    |    |    | r  |    |    |    |    |    | r  |    |    | ■                     |
| Other species                                  |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |                       |
| <i>Atrichum flavisetum</i>                     |     | 1   |    |    |    |    |    |    | 1  | +  | 1  |    |    | +  |    | ■                     |
| <i>Ceratodon purpureus</i>                     | +   | r   |    |    |    |    |    |    |    | 1  |    |    |    | +  | 1  | ■                     |
| <i>Hylocomium splendens</i>                    |     | +   |    | +  |    |    |    |    | 1  |    |    |    |    |    |    | ■                     |
| <i>Ptychostomum capillare</i>                  |     |     |    |    | +  |    |    |    |    |    |    |    |    |    | +  | ■                     |

Low constancy species: *Scapania scandica* (8-+); *Callicladium haldanianum* (5-+); *Plagiochila porelloides* (12-+); *Plagiothecium laetum* (5-+); *Sphagnum girgensohnii* (13-+).

Table 22. Association *Atrichetum flaviseti-undulati* ass. nov.

|   | 1  | 2  | 3! | 4   | 5  | 6  | 7  | 8  | 9  | 10! | 11 | 12 | 13 | 14  | 15 | C<br>O<br>N<br>S<br>T |
|---|----|----|----|-----|----|----|----|----|----|-----|----|----|----|-----|----|-----------------------|
| Number of releve  | 1  | 2  | 3! | 4   | 5  | 6  | 7  | 8  | 9  | 10! | 11 | 12 | 13 | 14  | 15 |                       |
| Localization of releve  | 25 | 12 | 19 | 10  | 11 | 11 | 27 | 27 | 12 | 28  | 28 | 12 | 27 | 12  | 8  |                       |
| Substratum  | S  | S  | S  | S   | S  | S  | S  | S  | S  | S   | S  | S  | S  | S   | S  |                       |
| Width of the plot, cm   | 30 | 50 | 40 | 30  | 30 | 50 | 40 | 20 | 30 | 50  | 30 | 20 | 40 | 40  | 50 |                       |
| Length of the plot, cm  | 40 | 50 | 80 | 50  | 70 | 50 | 40 | 40 | 40 | 30  | 40 | 60 | 30 | 50  | 50 |                       |
| Cover, %  | 80 | 70 | 90 | 100 | 80 | 90 | 80 | 90 | 90 | 80  | 70 | 80 | 70 | 100 | 80 |                       |
| Number of species in releve   | 6  | 9  | 9  | 8   | 7  | 9  | 8  | 9  | 7  | 8   | 4  | 4  | 8  | 1   | 4  |                       |
| Diagnostic species of association   |    |    |    |     |    |    |    |    |    |     |    |    |    |     |    |                       |
| <i>Atrichum flavisetum</i>  | 2  | 2  | 3  | 3   | 2  | 3  | 3  | 3  | 3  | 4   | 4  | 4  | 4  | 5   | 3  | V                     |
| <i>Atrichum undulatum</i>   | 3  | 2  | 3  | 3   | 2  | 3  | 2  | 1  | 2  | 1   | +  | +  | +  |     |    | IV                    |
| Diagnostic species of suballiance, alliance, order and class  |    |    |    |     |    |    |    |    |    |     |    |    |    |     |    |                       |
| <i>Polytrichum formosum</i>   |    |    |    | 1   | 2  | +  | +  | +  | +  |     |    |    |    |     |    | II                    |
| <i>Polytrichum juniperinum</i>  |    | +  | +  | +   | +  | r  | 1  | 1  |    |     |    |    |    |     |    | II                    |
| <i>Dicranella heteromalla</i>   |    |    |    |     | 1  | 1  | 1  | 1  |    |     | +  | +  |    |     |    | II                    |
| <i>Polytrichum commune</i>  | +  | +  | +  |     |    |    |    |    |    |     |    |    |    |     |    | I                     |
| <i>Pohlia cruda</i>   |    |    |    |     | 1  | +  |    |    |    |     |    |    |    |     |    | I                     |
| Other species   |    |    |    |     |    |    |    |    |    |     |    |    |    |     |    |                       |
| <i>Ceratodon purpureus</i>  |    | +  | +  | 1   | r  | r  |    | +  | 3  |     |    | r  |    |     |    | III                   |
| <i>Brachythecium salebrosum</i>   |    |    | 1  | +   | +  |    |    | 1  |    |     |    |    |    |     |    | II                    |
| <i>Pohlia nutans</i>  | 1  | 1  |    |     |    | +  | +  | 1  |    |     | +  |    |    |     |    | II                    |
| <i>Sciuro-hypnum starkei</i>  |    |    | 1  |     | +  |    |    |    |    |     |    |    | +  |     | 3  | II                    |
| <i>Eurhynchium pulchellum</i>   |    |    |    |     |    |    |    | 1  |    | +   |    |    | 1  |     |    | I                     |
| <i>Plagionium ellipticum</i>  |    |    |    |     |    |    |    |    |    |     | +  |    | 1  |     |    | I                     |
| <i>Plagiomnium cuspidatum</i>   | +  |    | +  | +   |    |    |    |    |    |     |    |    |    |     |    | I                     |
| <i>Plagiothecium laetum</i>   |    |    |    |     |    |    |    |    | r  |     |    |    |    |     | +  | I                     |
| <i>Rhodobryum roseum</i>  |    |    | +  |     |    |    |    |    |    |     |    |    | +  |     |    | I                     |
| <i>Sanionia uncinata</i>  |    |    | 1  |     |    |    |    |    |    | 1   |    |    |    |     |    | I                     |
| Low constancy species: <i>Calypogeia muelleriana</i> (6-+); <i>Cirriphyllum piliferum</i> (10-+); <i>Hygroamblystegium varium</i> (13-+); <i>Hylocomium splendens</i> (5-+); <i>Leptobryum pyriforme</i> (8-+); <i>Mnium stellare</i> (13-+); <i>Plagiochila porelloides</i> (15-+); <i>Pleurozium schreberi</i> (2-r); <i>Pogonatum urnigerum</i> (10-1); <i>Pohlia annotina</i> (10-+); <i>Pohlia bulbifera</i> (10-+); <i>Ptychostomum capillare</i> (10-+); <i>Ptychostomum moravicum</i> (7-+); <i>Sciuro-hypnum curtum</i> (1-+); |    |    |    |     |    |    |    |    |    |     |    |    |    |     |    |                       |

Table 23. *Tetraphis pellucida* – community

|                                    | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8   | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17  | C |
|------------------------------------|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|-----|---|
| Number of releve                   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8   | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17  | O |
| Localization of releve             | 2  | 14 | 19 | 5  | 8  | 5  | 5  | 24  | 16 | 14 | 12 | 19 | 9  | 1  | 19 | 11 | 25  | N |
| Substratum                         | PA | R  | R  | AS | R  | PA | PA | R   | R  | R  | R  | R  | AS | R  | R  | R  | R   | S |
| Width of the plot, cm              | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20  | 30 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20  | T |
| Length of the plot, cm             | 40 | 20 | 10 | 40 | 20 | 40 | 40 | 30  | 30 | 20 | 20 | 20 | 40 | 20 | 10 | 20 | 20  |   |
| Cover, %                           | 80 | 70 | 80 | 70 | 70 | 90 | 90 | 100 | 80 | 90 | 60 | 80 | 70 | 90 | 80 | 80 | 100 |   |
| Number of species in releve        | 6  | 5  | 6  | 5  | 5  | 5  | 5  | 6   | 6  | 6  | 6  | 5  | 5  | 7  | 6  | 7  | 8   |   |
| Height above the ground, cm        | 40 | –  | –  | 40 | –  | 40 | 40 | –   | –  | –  | –  | –  | 40 | –  | –  | –  | –   |   |
| Diagnostic species of association  |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |    |     |   |
| <i>Tetraphis pellucida</i>         | 5  | 5  | 5  | 5  | 5  | 4  | 4  | 4   | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4   | V |
| <i>Plagiothecium laetum</i>        |    | r  | r  | +  | +  | +  | 2  | 1   | 1  | 1  | 1  | 1  | +  | r  |    |    |     | M |
| <i>Dicranum montanum</i>           | r  |    | 1  | 1  | 1  | 2  | +  | 2   |    |    |    |    |    |    | r  | 1  | +   | ■ |
| Diagnostic species of order        |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |    |     |   |
| <i>Dicranum scoparium</i>          | r  |    |    |    |    |    |    | +   | r  | +  | +  |    |    |    |    |    | +   | ■ |
| <i>Ptilidium pulcherrimum</i>      | r  | 1  |    | 1  |    | +  |    |     |    |    |    |    |    |    |    |    |     | ■ |
| Diagnostic species of class        |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |    |     |   |
| <i>Lophocolea heterophylla</i>     |    | r  | r  |    |    |    |    |     |    |    |    | r  | r  | +  | r  |    |     | I |
| <i>Blepharostoma trichophyllum</i> | +  |    |    |    |    |    |    |     |    |    |    |    |    |    | r  | r  |     | I |
| Other species                      |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |    |     |   |
| <i>Amblystegium serpens</i>        |    |    | r  |    |    |    |    |     | r  |    |    |    |    |    |    |    |     | I |
| <i>Sciuro-hypnum reflexum</i>      | 1  |    |    |    |    |    |    |     |    |    |    |    |    | +  |    |    | 1   | I |
| <i>Callicladium haldanianum</i>    |    |    |    |    | 1  |    |    |     |    |    | 2  |    |    |    |    | 2  |     | I |
| <i>Cephalozia pleniceps</i>        |    |    |    |    |    |    |    | r   |    |    |    |    |    |    | r  |    |     | I |
| <i>Dicranum polysetum</i>          |    |    |    |    |    |    |    |     |    | r  |    |    |    |    | r  |    |     | I |
| <i>Eurhynchiastrum pulchellum</i>  |    |    |    | 2  |    |    | 1  |     |    |    |    |    |    | +  |    |    |     | I |
| <i>Lophozia longidens</i>          |    |    |    |    |    |    |    | r   |    |    |    |    |    |    |    |    | r   | I |
| <i>Plagiochila porelloides</i>     |    |    |    |    |    |    |    |     |    |    | +  |    |    |    |    |    | 1   | I |
| <i>Plagiothecium denticulatum</i>  |    | +  |    |    |    |    |    |     |    |    |    |    |    |    |    |    | 1   | I |
| <i>Pleurozium schreberi</i>        | r  |    |    |    | +  |    |    |     |    |    |    |    | 2  |    | r  |    | +   | ■ |
| <i>Pohlia cruda</i>                |    |    |    |    |    |    |    |     |    | +  |    |    |    | r  |    | r  |     | I |

Lowconstancy species: *Brachythecium salebrosum* (3–1); *Hylocomium splendens* (12–2); *Calliergonella lindbergii* (17–+); *Lepidozia reptans* (17–r); *Plagiomnium cuspidatum* (11–+); *Pogonatum urnigerum* (16–+); *Pohlia nutans* (1–r); *Polytrichum juniperinum* (12–+); *P. longisetum* (9–1); *Rhodobryum roseum* (7–+); *Sanionia uncinata* (6–+); *Sciuro-hypnum curtum* (9–r); *S. starkei* (10–2).

Table 24. Association *Brachythecio salebrosi–Amblystegietum juratzkani* (Sjogren ex Marstaller 1987) Marstaller 1989

|  | 1  | 2  | 3   | 4  | 5  | 6   | 7  | 8  | 9   | 10 | 11 | 12 | 13 | 14  | 15 | 16 | 17  | 18  | 19  | 20  | 21 | 22  | C<br>O<br>N<br>S<br>T |  |
|--|----|----|-----|----|----|-----|----|----|-----|----|----|----|----|-----|----|----|-----|-----|-----|-----|----|-----|-----------------------|--|
| Number of releve   | 1  | 2  | 3   | 4  | 5  | 6   | 7  | 8  | 9   | 10 | 11 | 12 | 13 | 14  | 15 | 16 | 17  | 18  | 19  | 20  | 21 | 22  |                       |  |
| Localization of releve   | 19 | 13 | 13  | 21 | 13 | 16  | 19 | 22 | 19  | 11 | 20 | 14 | 24 | 24  | 1  | 1  | 19  | 1   | 16  | 23  | 25 | 19  |                       |  |
| Substratum   | TC | PT | PT  | AP | UG | R   | PT | UG | R   | PT | UG | QR | AP | R   | AS | TC | R   | R   | R   | R   | PT | R   |                       |  |
| Width of the plot, cm  | 20 | 20 | 20  | 15 | 20 | 20  | 30 | 30 | 30  | 30 | 20 | 40 | 30 | 20  | 20 | 20 | 20  | 30  | 20  | 20  | 20 | 30  | 20                    |  |
| Length of the plot, cm   | 20 | 50 | 40  | 35 | 30 | 40  | 20 | 25 | 20  | 40 | 30 | 20 | 20 | 20  | 30 | 30 | 20  | 20  | 30  | 20  | 30 | 40  |                       |  |
| Cover, %   | 80 | 90 | 100 | 80 | 90 | 100 | 90 | 80 | 100 | 80 | 80 | 90 | 90 | 100 | 80 | 90 | 100 | 100 | 100 | 100 | 80 | 100 |                       |  |
| Number of species in releve  | 4  | 3  | 5   | 6  | 4  | 6   | 2  | 5  | 2   | 5  | 5  | 7  | 5  | 4   | 7  | 7  | 4   | 6   | 6   | 8   | 4  | 7   |                       |  |
| Height above the ground, cm  | 20 | 50 | 40  | 35 | 30 | –   | 20 | 25 | –   | 40 | 30 | 20 | 20 | –   | 30 | 30 | –   | –   | –   | –   | 30 | –   |                       |  |
| Diagnostic species of association  |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     |    |     |                       |  |
| <i>Amblystegium serpens</i>  | 5  | 5  | 5   | 5  | 5  | 5   | 5  | 4  | 4   | 4  | 4  | 4  | 3  | 2   | 2  | 1  | 1   | 1   | 1   | +   | 1  | r   | V                     |  |
| Diagnostic species of alliance and order <i>Brachythecietalia</i>            |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     |    |     |                       |  |
| <i>Brachythecium salebrosum</i>  |    |    | +   | +  | +  | 1   | 1  | 1  | 2   | 2  | 2  | +  | 3  | 3   | 3  | 4  | 4   | 4   | 4   | 4   | 5  | 5   | V                     |  |
| <i>Sciuro-hypnum reflexum</i>  | +  |    |     |    |    | +   |    |    |     |    | +  | r  |    | 1   | 2  |    |     |     |     | 2   |    |     | I                     |  |
| <i>Sciuro-hypnum oedipodium</i>  |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     | +   |     |    |     | I                     |  |
| <i>Campylophyllopsis sommerfeltii</i>  |    |    |     |    |    | r   |    | r  |     | r  |    |    |    | r   | r  |    |     | +   |     |     |    |     | I                     |  |
| Diagnostic species of class <i>Cladonio digitatae–Lepidozietea reptantis</i> |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     |    |     |                       |  |
| <i>Lophocolea heterophylla</i>   |    |    |     |    | r  |     |    |    |     |    | +  | r  |    |     | r  |    |     |     |     | r   |    | +   | I                     |  |
| <i>Lophocolea minor</i>  |    |    |     | +  |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     |    |     | I                     |  |
| <i>Jochenia pallescens</i>   |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     |    | +   | I                     |  |
| Other species  |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     |    |     |                       |  |
| <i>Anomodon longifolius</i>  |    |    |     |    |    | r   |    | 1  |     |    |    |    |    |     |    |    |     |     |     | r   |    |     | I                     |  |
| <i>Callicladium haldanianum</i>  |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     | r  | +   | I                     |  |
| <i>Leskeella nervosa</i>   |    |    |     | 1  |    |     |    |    |     |    |    |    | 1  |     |    |    |     |     |     |     |    |     | I                     |  |
| <i>Neckera pennata</i>   |    | r  | +   |    |    |     |    |    |     |    |    |    |    |     |    | r  |     |     |     |     |    |     | I                     |  |
| <i>Plagiochila porelloides</i>   |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    |    |     |     |     |     | r  |     | I                     |  |
| <i>Plagiomnium cuspidatum</i>  | +  | 2  | +   | 1  | +  |     |    |    |     |    | 1  |    |    | 2   | +  | +  |     | 1   | +   | +   |    |     | I                     |  |
| <i>Pleurozium schreberi</i>  | 1  |    |     |    |    |     |    |    |     |    |    | r  |    |     |    |    | +   | +   |     | +   |    | r   | I                     |  |
| <i>Pohlia nutans</i>   |    |    |     |    |    |     |    |    |     |    |    | +  | +  |     |    |    |     |     |     |     | r  |     | I                     |  |
| <i>Pylaisia polyantha</i>  |    |    |     | +  |    |     |    | +  |     | r  |    |    | +  |     |    | +  |     |     |     |     |    |     | I                     |  |
| <i>Hylocomiadelphus triquetrus</i>   |    |    |     |    |    |     |    |    |     |    |    |    |    |     |    | +  |     |     |     |     |    |     | I                     |  |
| <i>Sanionia uncinata</i>   |    |    | 1   |    |    | r   |    |    |     |    | +  | 2  |    | +   |    |    | 1   | 1   |     | 1   |    |     | I                     |  |

Low constancy species: *Hygroamblystegium varium* (11–+); *Dicranum montanum* (22–r); *D. scoparium* (20–+); *Eurhynchiastrum pulchellum* (2–+); *Plagiothecium denticulatum* (18–+); *P. laetum* (20–r); *Platygyrium repens* (22–+); *Polytricum juniperinum* (20–+); *Ptilidium pulcherrimum* (2–+); *Ptychostomum capillare* (9–1); *Radula complanata* (7–r); *Rhizomnium punctatum* (18–+).

Table 25. Association *Brachythecio salebrosi–Drepanocladetum uncinati* Marstaller 1989

|   | 1   | 2  | 3   | 4   | 5   | 6   | 7   | 8   | 9  | 10  | 11 | 12 | 13 | 14  | 15  | 16  | 17  | 18  | 19  | 20 | 21  | 22 | C<br>O<br>N<br>S<br>T |   |
|---|-----|----|-----|-----|-----|-----|-----|-----|----|-----|----|----|----|-----|-----|-----|-----|-----|-----|----|-----|----|-----------------------|---|
| Number of releve  | 1   | 2  | 3   | 4   | 5   | 6   | 7   | 8   | 9  | 10  | 11 | 12 | 13 | 14  | 15  | 16  | 17  | 18  | 19  | 20 | 21  | 22 |                       |   |
| Localization of releve  | 2   | 25 | 1   | 11  | 24  | 8   | 10  | 9   | 5  | 9   | 3  | 14 | 1  | 1   | 12  | 12  | 19  | 1   | 9   | 10 | 35  | 48 |                       |   |
| Substratum  | R   | R  | TC  | PT  | QR  | R   | R   | PT  | R  | PA  | PA | R  | AS | TC  | TC  | TC  | AP  | TC  | R   | R  | TC  | TC |                       |   |
| Width of the plot, cm   | 20  | 20 | 10  | 20  | 10  | 20  | 20  | 20  | 30 | 30  | 20 | 20 | 20 | 20  | 10  | 20  | 10  | 10  | 20  | 20 | 10  | 30 |                       |   |
| Length of the plot, cm  | 40  | 50 | 60  | 170 | 30  | 200 | 100 | 130 | 50 | 20  | 40 | 20 | 40 | 40  | 10  | 20  | 30  | 40  | 50  | 30 | 40  | 30 |                       |   |
| Cover, %  | 100 | 90 | 90  | 80  | 100 | 100 | 100 | 90  | 80 | 70  | 80 | 90 | 80 | 90  | 90  | 80  | 90  | 100 | 100 | 90 | 90  | 90 |                       |   |
| Number of species in releve   | 7   | 5  | 3   | 3   | 3   | 5   | 8   | 4   | 6  | 3   | 4  | 8  | 8  | 5   | 5   | 6   | 5   | 7   | 6   | 9  | 4   | 4  |                       |   |
| Height above the ground (limits), cm  | –   | –  | 50– | 30– | 0–  | –   | –   | 70– | –  | 10– | 0– | –  | 0– | 50– | 40– | 60– | 30– | 50– | –   | –  | 20– | 0– |                       |   |
|   |     |    | 110 | 200 | 30  |     |     | 200 |    | 30  | 40 |    | 40 | 90  | 50  | 80  | 60  | 90  |     |    | 60  | 30 |                       |   |
| Diagnostic species of association   |     |    |     |     |     |     |     |     |    |     |    |    |    |     |     |     |     |     |     |    |     |    |                       |   |
| <i>Sanionia uncinata</i>  | 5   | 5  | 5   | 5   | 5   | 4   | 4   | 4   | 4  | 4   | 4  | 4  | 4  | 4   | 4   | 3   | 4   | 4   | 4   | 3  | 4   | 4  | 4                     | V |
| <i>Brachythecium salebrosum</i>   | +   |    |     |     | 1   |     |     |     |    |     |    | +  |    | r   |     |     | +   | +   | +   | 2  | 2   | 2  | ■                     |   |
| Diagnostic species of alliance and order <i>Brachythecietalia</i>             |     |    |     |     |     |     |     |     |    |     |    |    |    |     |     |     |     |     |     |    |     |    |                       |   |
| <i>Amblystegium serpens</i>   | r   |    |     |     | r   |     |     |     |    |     |    |    |    |     |     |     |     |     |     | r  |     | r  | I                     |   |
| <i>Sciuro–hypnum reflexum</i>   |     |    |     | +   |     |     |     |     |    |     |    |    | +  | +   | 2   | 3   | 2   | 1   | 1   | 1  | 1   |    | ■                     |   |
| <i>Campylophyllopsis sommerfeltii</i>   | +   |    |     |     |     | 1   |     |     |    |     |    |    |    |     |     |     |     |     |     | r  |     |    | I                     |   |
| Diagnostic species of class <i>Cladonio digitatae–Lepidozietaea reptantis</i> |     |    |     |     |     |     |     |     |    |     |    |    |    |     |     |     |     |     |     |    |     |    |                       |   |
| <i>Lophocolea heterophylla</i>  |     |    |     |     |     |     |     |     | +  |     |    |    |    |     |     |     |     |     |     |    | +   |    | I                     |   |
| <i>Plagiothecium denticulatum</i>   |     |    |     |     |     |     |     |     |    |     |    |    |    |     |     |     |     |     |     | r  |     | +  | I                     |   |
| <i>Ptilidium pulcherrimum</i>   |     |    | 1   | +   |     |     |     | 2   | r  | 2   | +  | 1  | 1  |     |     |     |     |     |     | +  | +   |    | ■                     |   |
| Diagnostic species of order <i>Dicranetalia</i>                               |     |    |     |     |     |     |     |     |    |     |    |    |    |     |     |     |     |     |     |    |     |    |                       |   |
| <i>Dicranum scoparium</i>   |     | 1  |     |     |     | 1   | +   | +   | +  |     |    | +  | 1  | 1   |     | +   |     | +   |     |    |     |    | ■                     |   |
| <i>Dicranum montanum</i>  |     |    | +   |     |     | +   | 1   |     |    | +   |    | +  | r  |     |     |     | +   |     |     |    | +   |    | ■                     |   |
| <i>Jochenia pallescens</i>  |     |    |     |     |     |     |     |     | +  |     |    | 2  |    |     |     |     |     |     |     |    |     |    | I                     |   |
| Other species   |     |    |     |     |     |     |     |     |    |     |    |    |    |     |     |     |     |     |     |    |     |    |                       |   |
| <i>Calliergon cordifolium</i>   | +   | +  |     |     |     |     | +   |     |    |     |    |    |    |     |     |     |     |     |     |    |     |    | I                     |   |
| <i>Plagiomnium cuspidatum</i>   |     |    |     |     |     |     |     |     |    |     |    |    | 2  |     | r   | r   |     |     |     | 1  |     |    | I                     |   |
| <i>Platygyrium repens</i>   |     |    |     |     | 1   |     |     |     |    |     |    |    |    |     | r   | r   |     |     |     |    |     |    | I                     |   |
| <i>Pleurozium schreberi</i>   |     |    |     |     |     |     |     | 2   |    |     |    |    |    |     | r   | r   |     |     |     |    | +   |    | I                     |   |
| <i>Pylaisia polyantha</i>   |     |    |     |     |     |     |     |     |    |     |    |    | r  | 1   |     |     |     |     |     | +  |     |    | I                     |   |

Low constancy species: *Anomodon viticulosus* (1–r; 12–2), *Aulacomnium palustre* (7–1), *Pseudoamblystegium subtile* (18–+), *Sciuro–hypnum starkei* (11–1); *S. oedipodium* (1–1); *Chiloscyphus pallescens* (7–+), *Climacium dendroides* (2–r), *Dicranum polysetum* (12–r), *Eurhynchiastrum pulchellum* (13–+), *Calliergonella lindbergii* (2–+), *Lewinskya speciosa* (8–1), *Plagiochila porelloides* (7–+), *Pohlia nutans* (7–+), *Rhizomnium punctatum* (6–+), *Rhodobryum roseum* (19–+), *Radula complanata* (12–r; 17–+); *Tetraphis pellucida* (20–1).

Table 26. Association *Brachythecietum salebrosi-curti* ass. nov.

|  | 1   | 2  | 3   | 4  | 5  | 6  | 7! | 8  | 9   | 10 | 11  | 12 | 13 | 14  | 15 | C<br>O<br>N<br>S<br>T |   |
|--|-----|----|-----|----|----|----|----|----|-----|----|-----|----|----|-----|----|-----------------------|---|
| Number of releve                         | 1   | 2  | 3   | 4  | 5  | 6  | 7! | 8  | 9   | 10 | 11  | 12 | 13 | 14  | 15 |                       |   |
| Localization of releve                   | 19  | 19 | 19  | 14 | 16 | 14 | 14 | 19 | 11  | 15 | 14  | 19 | 15 | 15  | 13 |                       |   |
| Substratum                               | S   | S  | S   | S  | S  | S  | S  | S  | S   | S  | S   | S  | S  | S   | S  |                       |   |
| Width of the plot, cm                    | 20  | 50 | 40  | 40 | 50 | 50 | 50 | 50 | 20  | 30 | 40  | 40 | 30 | 20  | 20 |                       |   |
| Length of the plot, cm                   | 20  | 50 | 60  | 80 | 50 | 50 | 50 | 50 | 20  | 40 | 50  | 40 | 50 | 20  | 20 |                       |   |
| Cover, %                                 | 100 | 90 | 100 | 90 | 80 | 80 | 80 | 90 | 100 | 90 | 100 | 90 | 90 | 100 | 90 |                       |   |
| Number of species in releve              | 5   | 4  | 5   | 3  | 4  | 5  | 6  | 4  | 3   | 5  | 7   | 6  | 5  | 7   | 5  |                       |   |
| Diagnostic species of association        |     |    |     |    |    |    |    |    |     |    |     |    |    |     |    |                       |   |
| <i>Sciuro-hypnum curtum</i>              | 5   | 5  | 5   | 4  | 4  | 4  | 4  | 4  | 3   | 3  | 2   | 2  | 1  | 1   | 1  |                       | V |
| <i>Brachythecium salebrosum</i>          | +   |    |     |    | +  | +  | +  | 1  | 1   | 2  | 2   | 2  | 2  | 2   | 2  |                       | V |
| Diagnostic species of alliance and order |     |    |     |    |    |    |    |    |     |    |     |    |    |     |    |                       |   |
| <i>Amblystegium serpens</i>              | r   |    |     |    |    | +  |    |    |     |    |     | r  | r  | r   |    |                       | ■ |
| <i>Brachytheciastrum velutinum</i>       |     | 1  | +   | +  | r  |    |    | 1  |     | +  | +   |    |    | 2   | 3  |                       | ■ |
| <i>Brachythecium rutabulum</i>           |     |    |     |    |    | +  |    |    |     |    |     |    |    |     |    |                       | I |
| <i>Campylophyllopsis sommerfeltii</i>    | +   |    |     |    |    |    |    |    |     |    |     |    |    |     |    |                       | I |
| Diagnostic species of class              |     |    |     |    |    |    |    |    |     |    |     |    |    |     |    |                       |   |
| <i>Lophocolea heterophylla</i>           |     |    | +   |    |    | +  | +  |    |     | r  | +   |    |    | 1   | +  | ■                     |   |
| <i>Plagiothecium denticulatum</i>        |     | +  |     |    |    |    | +  |    |     |    |     |    | +  |     |    | I                     |   |
| <i>Jochenia pallescens</i>               | 1   |    |     |    |    |    |    | 2  |     |    |     |    |    |     |    | I                     |   |
| Other species                            |     |    |     |    |    |    |    |    |     |    |     |    |    |     |    |                       |   |
| <i>Eurhynchiastrum pulchellum</i>        |     |    | 1   | 1  |    |    |    |    |     |    |     |    |    |     |    |                       |   |
| <i>Plagiochila porelloides</i>           |     |    |     |    |    |    |    |    |     |    | 1   | 3  |    |     |    | I                     |   |
| <i>Plagiothecium cavifolium</i>          |     |    |     |    |    |    |    |    |     |    | +   |    |    | 1   |    | I                     |   |
| <i>Pleurozium schreberi</i>              |     |    |     |    |    |    |    |    | 1   |    |     | 1  |    |     |    | I                     |   |
| <i>Rhodobryum roseum</i>                 |     | +  | 1   |    | 2  |    |    | +  |     | 1  | 1   |    | 2  | +   |    | ■                     |   |

Low constancy species: *Aulacomnium palustre* (12-r); *Plagiomnium cuspidatum* (15-+); *Pohlia nutans* (7-+).

Table 27. Association *Brachythecietum salebrosi-reflexi* Pisarenko 1999 subass. *brachythecietosum reflexi* (Baisheva & al. 1994)

Pisarenko 1999

|   | 1    | 2       | 3    | 4    | 5     | 6     | 7    | 8    | 9    | 10   | 11  | 12   | 13     | 14    | 15    | 16    | 17    | 18   | 19  | 20   | 21     | 22   | 23  | CONST |
|---|------|---------|------|------|-------|-------|------|------|------|------|-----|------|--------|-------|-------|-------|-------|------|-----|------|--------|------|-----|-------|
| Number of releve                                | 1    | 2       | 3    | 4    | 5     | 6     | 7    | 8    | 9    | 10   | 11  | 12   | 13     | 14    | 15    | 16    | 17    | 18   | 19  | 20   | 21     | 22   | 23  |       |
| Localization of releve                          | 25   | 13      | 21   | 20   | 1     | 1     | 24   | 25   | 22   | 16   | 11  | 24   | 13     | 13    | 13    | 1     | 6     | 11   | 16  | 19   | 10     | 12   | 45  |       |
| Substratum                                      | AP   | TC      | QR   | FE   | PT    | PT    | TC   | QR   | PT   | AG   | R   | AP   | TC     | TC    | TC    | PT    | QR    | PA   | R   | QR   | TC     | PT   | R   |       |
| Width of the plot, cm                           | 30   | 20      | 30   | 20   | 20    | 30    | 20   | 20   | 30   | 40   | 30  | 30   | 20     | 30    | 20    | 30    | 40    | 20   | 20  | 10   | 20     | 40   | 30  |       |
| Length of the plot, cm                          | 30   | 60      | 30   | 30   | 30    | 30    | 20   | 20   | 20   | 30   | 100 | 30   | 90     | 40    | 40    | 40    | 25    | 30   | 120 | 30   | 100    | 30   | 90  |       |
| Cover, %  | 100  | 90      | 90   | 90   | 100   | 100   | 90   | 100  | 100  | 100  | 100 | 90   | 90     | 100   | 90    | 100   | 90    | 100  | 100 | 100  | 90     | 100  | 100 |       |
| Number of species in releve                     | 5    | 4       | 5    | 5    | 5     | 6     | 4    | 4    | 4    | 7    | 5   | 7    | 5      | 7     | 4     | 7     | 6     | 4    | 7   | 4    | 4      | 7    | 4   |       |
| Height above the ground (limits), cm            | 0–30 | 100–160 | 0–30 | 0–30 | 30–60 | 30–60 | 0–20 | 0–20 | 0–20 | 0–30 | –   | 0–30 | 50–140 | 40–80 | 20–60 | 40–80 | 35–60 | 0–30 | –   | 0–30 | 60–160 | 0–30 | –   |       |
| Diagnostic species of association               |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       |      |     |      |        |      |     |       |
| <i>Sciuro-hypnum reflexum</i>                   | 5    | 5       | 5    | 5    | 5     | 5     | 4    | 4    | 4    | 4    | 4   | 4    | 4      | 4     | 4     | 4     | 4     | 4    | 4   | 4    | 3      | 3    | 3   | V     |
| <i>Brachythecium salebrosum</i>                 |      |         |      |      |       | +     | r    | +    | 1    | 2    | 1   |      |        |       |       |       |       |      |     |      |        |      |     | ■     |
| Diagnostic species of alliance                  |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       |      |     |      |        |      |     |       |
| <i>Amblystegium serpens</i>                     |      |         |      |      | +     |       |      |      |      |      |     | +    |        |       |       |       |       | +    |     |      |        | 1    |     | I     |
| <i>Sciuro-hypnum starkei starkei</i>            |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       | 1    | +   |      |        |      |     | I     |
| <i>Brachytheciastrum velutinum</i>              |      |         |      |      |       |       |      | +    |      | +    |     |      |        |       |       |       |       |      |     |      |        |      |     | I     |
| Diagnostic species of class                     |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       |      |     |      |        |      |     |       |
| <i>Lophocolea heterophylla</i>                  |      |         |      |      |       |       |      |      | r    |      | +   |      |        |       |       |       |       |      |     | 1    |        |      | +   | I     |
| <i>Plagiothecium denticulatum</i>               |      |         | 1    |      |       |       |      |      |      |      |     | +    |        |       |       |       |       |      |     |      |        |      |     | I     |
| Diagnostic species of order <i>Dicranetalia</i> |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       |      |     |      |        |      |     |       |
| <i>Dicranum scoparium</i>                       |      | +       |      |      |       |       |      |      |      |      | 1   |      | r      | r     | +     | +     |       |      |     |      |        |      |     | ■     |
| <i>Dicranum montanum</i>                        |      |         | 1    |      |       | +     |      |      |      |      |     | 1    | 1      | 1     | 2     | +     |       |      |     |      |        |      |     | ■     |
| <i>Ptilidium pulcherrimum</i>                   |      |         |      |      | r     | r     |      |      |      |      |     |      | 1      | +     | r     | 1     | 2     |      |     |      |        | r    |     | ■     |
| <i>Plagiothecium laetum</i>                     |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       |      | r   | +    |        |      |     | I     |
| Other species                                   |      |         |      |      |       |       |      |      |      |      |     |      |        |       |       |       |       |      |     |      |        |      |     |       |
| <i>Pseudoleskeella nervosa</i>                  | 1    |         | +    | +    |       |       |      |      |      |      |     | +    |        |       |       |       |       |      |     | 1    |        |      |     | ■     |
| <i>Neckera pennata</i>                          |      |         |      |      | 1     | 2     |      |      |      |      |     | 1    |        | r     |       | 2     | +     |      |     |      | 2      |      |     | ■     |
| <i>Plagiomnium cuspidatum</i>                   |      |         |      |      |       |       |      | 2    |      |      |     |      |        | r     |       |       | +     |      | 2   | 1    |        | 2    | 2   | ■     |
| <i>Pylaisia polyantha</i>                       | +    |         |      | 1    | +     |       | +    |      |      |      |     |      |        |       |       |       | 1     |      |     |      |        |      |     | ■     |
| <i>Radula complanata</i>                        | +    | 1       | +    | r    |       |       |      |      |      |      |     |      |        |       |       |       |       |      |     |      | 1      |      |     | ■     |
| <i>Sanionia uncinata</i>                        |      |         |      |      |       | +     |      |      |      |      |     |      | r      | +     |       |       | +     | 1    | +   |      |        | 1    |     | ■     |

Lowconstancy species: *Hygroamblystegium varium* (1+), *Campylophyllopsis sommerfeltii* (22-r), *Ceratodon purpureus* (7+), *Dicranella heteromalla* (12, 13-1), *Homalia trichomanoides* (21+), *Hylocomium splendens* (15-1), *Jochenia pallescens* (7-2), *Calliergonella lindbergii* (10-r), *Lewinskya speciosa* (2+, 16-1), *Plagiochila porelloides* (19-r, 22+), *Plagiomnium ellipticum* (9-2), *Plagiothecium cavifolium* (10-1), *Pleurozium schreberi* (11-1), *Pohlia nutans* (10+), *Hylacomia delphus triquetrus* (16-r), *Tetraphis pellucida* (23-2).

Table 28. Association *Brachythecietum salebrosi-reflexi* Pisarenko 1999 subass. *plagiomnietosum cuspidati* Pisarenko 1999

|                                       | 1  | 2  | 3  | 4   | 5  | 6   | 7  | 8   | 9  | 10 | 11 | 12 | 13  | 14  | 15 | 16 | 17 | 18 | 19  | 20 | 21  | 22 | 23 | 24 | 25  | 26 | 27 | C<br>O<br>N<br>S<br>T |   |
|---------------------------------------|----|----|----|-----|----|-----|----|-----|----|----|----|----|-----|-----|----|----|----|----|-----|----|-----|----|----|----|-----|----|----|-----------------------|---|
| Number of releve                      | 1  | 2  | 3  | 4   | 5  | 6   | 7  | 8   | 9  | 10 | 11 | 12 | 13  | 14  | 15 | 16 | 17 | 18 | 19  | 20 | 21  | 22 | 23 | 24 | 25  | 26 | 27 |                       |   |
| Localization of releve                | 13 | 21 | 25 | 21  | 1  | 22  | 13 | 1   | 1  | 13 | 13 | 19 | 35  | 25  | 1  | 5  | 2  | 13 | 24  | 24 | 8   | 13 | 8  | 9  | 9   | 24 | 13 |                       |   |
| Substratum                            | PT | TC | R  | AP  | TC | R   | TC | PT  | PT | PT | PT | PA | PA  | R   | R  | TC | S  | S  | R   | TC | PT  | TC | R  | S  | S   | QR | PT |                       |   |
| Width of the plot, cm                 | 30 | 20 | 20 | 30  | 30 | 20  | 30 | 20  | 20 | 20 | 20 | 20 | 40  | 20  | 30 | 20 | 20 | 30 | 20  | 20 | 30  | 30 | 20 | 40 | 30  | 40 | 40 | 20                    |   |
| Length of the plot, cm                | 40 | 30 | 20 | 30  | 30 | 20  | 40 | 40  | 40 | 40 | 40 | 20 | 40  | 30  | 20 | 30 | 20 | 30 | 30  | 40 | 40  | 40 | 20 | 10 | 20  | 30 | 40 |                       |   |
| Cover, %                              | 80 | 90 | 80 | 100 | 90 | 100 | 90 | 100 | 80 | 70 | 80 | 90 | 100 | 100 | 90 | 80 | 80 | 70 | 100 | 90 | 100 | 80 | 90 | 90 | 100 | 80 | 90 |                       |   |
| Number of species in releve           | 3  | 4  | 4  | 4   | 5  | 6   | 8  | 6   | 6  | 6  | 5  | 5  | 5   | 8   | 6  | 5  | 5  | 8  | 5   | 5  | 4   | 5  | 5  | 8  | 6   | 4  | 9  |                       |   |
| Height above the ground, cm           | 40 | 30 | -  | 30  | 60 | -   | 40 | 40  | 40 | 40 | 40 | 20 | 40  | -   | -  | 30 | -  | -  | -   | 40 | 40  | 40 | -  | -  | -   | 30 | 40 |                       |   |
| Diagnostic species of association     |    |    |    |     |    |     |    |     |    |    |    |    |     |     |    |    |    |    |     |    |     |    |    |    |     |    |    |                       |   |
| <i>Plagiomnium cuspidatum</i>         | 5  | 5  | 5  | 5   | 5  | 4   | 4  | 4   | 4  | 4  | 4  | 4  | 4   | 4   | 4  | 4  | 3  | 3  | 3   | 3  | 3   | 3  | 3  | 3  | 3   | 3  | 2  | 2                     | V |
| <i>Brachythecium salebrosum</i>       |    | +  | r  |     |    |     |    |     |    |    | 1  | 2  | 1   | 1   | 1  | +  | 2  | 1  | 1   |    |     |    |    |    |     |    |    | +                     | ■ |
| <i>Sciuro-hypnum reflexum</i>         |    |    |    | +   | 2  | 2   | 1  | +   | r  |    |    |    |     |     |    |    |    |    | 2   |    |     |    |    |    |     | 3  |    | ■                     |   |
| Diagnostic species of association     |    |    |    |     |    |     |    |     |    |    |    |    |     |     |    |    |    |    |     |    |     |    |    |    |     |    |    |                       |   |
| <i>Amblystegium serpens</i>           | 1  |    |    |     |    | +   |    | +   |    | +  | 2  |    | +   | 1   |    |    |    |    |     | +  | 3   |    |    |    | +   |    | 1  | ■                     |   |
| <i>Campylophyllopsis sommerfeltii</i> |    |    |    |     |    |     |    | +   |    |    |    |    |     |     | +  |    |    |    |     | +  |     |    | 2  | r  |     |    | r  | ■                     |   |
| Diagnostic species of class           |    |    |    |     |    |     |    |     |    |    |    |    |     |     |    |    |    |    |     |    |     |    |    |    |     |    |    |                       |   |
| <i>Lophocolea heterophylla</i>        |    |    |    |     |    | r   | r  | 1   |    | r  |    |    |     |     |    |    |    |    |     |    |     |    | +  |    |     |    |    | ■                     |   |
| <i>Cephalozia bicuspidata</i>         |    |    |    |     |    |     |    |     |    |    |    |    |     | r   | r  |    |    |    |     |    |     |    |    |    |     |    |    | ■                     |   |
| Other species                         |    |    |    |     |    |     |    |     |    |    |    |    |     |     |    |    |    |    |     |    |     |    |    |    |     |    |    |                       |   |
| <i>Calliergon cordifolium</i>         |    |    |    |     |    |     |    |     |    |    |    |    |     |     |    |    |    | 1  |     |    |     |    |    | +  | +   |    |    | ■                     |   |
| <i>Dicranum scoparium</i>             |    |    |    |     | +  |     | r  |     | r  |    |    |    |     |     |    |    |    |    |     |    |     |    |    |    |     |    |    | ■                     |   |
| <i>Oxyrrhynchium hians</i>            |    |    |    |     |    |     |    |     |    |    |    |    |     |     |    |    |    |    | 3   |    |     |    |    | 3  | 2   |    |    | ■                     |   |
| <i>Eurhynchiastrum pulchellum</i>     | +  |    |    |     |    |     |    |     | 1  |    | 2  |    | 2   |     |    | +  |    |    |     |    |     |    | 1  |    |     |    | 1  | ■                     |   |
| <i>Hylocomium splendens</i>           |    |    |    |     |    |     |    | +   | 1  |    |    | +  |     |     |    |    |    |    |     |    |     |    | 1  |    |     |    |    | ■                     |   |
| <i>Jochenia pallescens</i>            |    | 1  |    | 1   |    | +   |    |     |    |    |    |    | +   |     |    | 1  |    |    |     |    |     |    |    |    |     |    |    | ■                     |   |
| <i>Leskeella nervosa</i>              |    | +  |    | +   |    |     |    |     |    |    |    |    |     |     | +  |    |    |    |     |    |     | +  |    |    |     |    | r  | ■                     |   |
| <i>Neckera pennata</i>                |    |    |    |     |    |     |    |     | r  | r  | +  |    |     |     |    |    |    |    |     |    |     |    |    |    |     |    | +  | ■                     |   |
| <i>Plagiochila porelloides</i>        |    |    |    |     |    |     | 1  |     |    |    |    |    |     |     |    |    | +  | +  |     |    |     | +  |    |    |     |    |    | ■                     |   |
| <i>Pseudoamblystegium subtile</i>     |    |    |    |     |    |     |    |     |    |    |    | +  |     |     |    |    |    |    |     |    |     | r  |    |    |     | +  |    | ■                     |   |
| <i>Pohlia nutans</i>                  |    |    |    | 1   |    |     |    |     |    |    |    |    |     |     | +  |    |    |    |     |    |     |    |    |    |     |    |    | ■                     |   |
| <i>Hylocomiadelphus triquetrus</i>    |    |    |    |     |    |     | +  |     | 1  |    |    |    |     |     |    |    |    |    |     |    |     |    | 3  |    |     |    |    | ■                     |   |
| <i>Sanionia uncinata</i>              |    |    |    |     | +  |     |    |     |    |    |    |    |     |     | 2  | 1  |    | +  |     |    |     | 1  |    |    |     |    | r  | ■                     |   |

Lowconstancy species: *Atrichum flavisetum* (25-1), *Calli cladium haldanianum* (3-+), *Leptodictyum riparium* (17-r), *Mnium stellare* (27-2), *Dicranum montanum* (12-r), *Plagiomnium rostratum* (24-+), *Pohlia wahlendbergii* (24-+), *Polytrichum juniperinum* (18-+), *Ptilium crista-castrensis* (15-+), *Pylaisiapolyantha* (10-r), *Rhizomnium pseudopunctatum* (23-+), *Tetraphis pellucida* (18-r), *Fissidens bryoides* (24, 25-r), *Homalia trichomanoides* (20-1; 27-+), *Plagiothecium denticulatum* (6-1; 23-2), *Plagiomnium medium* (14-+; 25-1), *Pleurozium schreberi* (5-+; 9-1).



*Syntrichia ruralis*

|                 |                 |
|-----------------|-----------------|
| IV <sup>2</sup> | II <sup>+</sup> |
|-----------------|-----------------|

Diagnostic species of *Hylocomieta splendens*

*Pleurozium schreberi*

|                 |   |                 |   |
|-----------------|---|-----------------|---|
| II <sup>+</sup> | I | IV <sup>4</sup> | I |
|-----------------|---|-----------------|---|

*Hylocomiadelphus triquetrus*

|   |
|---|
| I |
|---|

Diagnostic species of *Platyhypnidio-Fontinalieta antipyreticae*

*Leptodictyum riparium*

|   |                  |                 |   |                |
|---|------------------|-----------------|---|----------------|
| I | III <sup>2</sup> | IV <sup>1</sup> | I | V <sup>3</sup> |
|---|------------------|-----------------|---|----------------|

*Brachythecium rivulare*

|   |                 |   |                 |
|---|-----------------|---|-----------------|
| I | II <sup>1</sup> | I | II <sup>+</sup> |
|---|-----------------|---|-----------------|

*Fontinalis anthipyretica*

|   |                 |
|---|-----------------|
| I | II <sup>+</sup> |
|---|-----------------|

Diagnostic species of *Neckeretea complanatae*

*Plagiomnium cuspidatum*

|                 |   |   |                 |   |   |   |   |   |
|-----------------|---|---|-----------------|---|---|---|---|---|
| II <sup>1</sup> | I | I | II <sup>+</sup> | I | I | I | I | I |
|-----------------|---|---|-----------------|---|---|---|---|---|

*Pseudoamblystegium subtile*

|                  |                 |   |                 |   |
|------------------|-----------------|---|-----------------|---|
| III <sup>+</sup> | II <sup>+</sup> | I | II <sup>+</sup> | I |
|------------------|-----------------|---|-----------------|---|

Diagnostic species of *Frullania dilatatae-Leucodentetea sciuroidis*

*Frullania bolanderi*

*Nyholmiella obtusifolia*

*Radula complanata*

*Leucodon sciuroides*

*Dicranum scoparium*

|  |                  |                  |                  |   |  |                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|------------------|------------------|------------------|---|--|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  | I                | I                |                  |   |  |                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | III <sup>2</sup> | I                | II <sup>+</sup>  | I |  | II <sup>1</sup>  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | II <sup>+</sup>  | III <sup>+</sup> | III <sup>+</sup> | I |  | III <sup>+</sup> |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | I                | I                |                  |   |  |                  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |                  |                  |                  |   |  |                  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Other species

*Amblystegium serpens*

|   |   |   |   |                 |   |   |  |   |   |                 |                  |                 |   |   |                 |   |                 |
|---|---|---|---|-----------------|---|---|--|---|---|-----------------|------------------|-----------------|---|---|-----------------|---|-----------------|
| I | I | I | I | II <sup>+</sup> | I | I |  | I | I | IV <sup>1</sup> | III <sup>+</sup> | II <sup>+</sup> | I | I | II <sup>r</sup> | I | II <sup>r</sup> |
|---|---|---|---|-----------------|---|---|--|---|---|-----------------|------------------|-----------------|---|---|-----------------|---|-----------------|

*Atrichum undulatum*

|  |  |   |   |   |  |  |  |  |  |  |  |  |  |  |   |  |  |
|--|--|---|---|---|--|--|--|--|--|--|--|--|--|--|---|--|--|
|  |  | I | I | I |  |  |  |  |  |  |  |  |  |  | I |  |  |
|--|--|---|---|---|--|--|--|--|--|--|--|--|--|--|---|--|--|

*Brachythecium salebrosum*

|  |  |                  |                 |                 |                  |   |  |                 |  |                 |  |                 |   |                  |   |   |   |
|--|--|------------------|-----------------|-----------------|------------------|---|--|-----------------|--|-----------------|--|-----------------|---|------------------|---|---|---|
|  |  | III <sup>+</sup> | II <sup>+</sup> | II <sup>+</sup> | III <sup>1</sup> | I |  | II <sup>+</sup> |  | II <sup>+</sup> |  | II <sup>+</sup> | I | III <sup>+</sup> | I | I | I |
|--|--|------------------|-----------------|-----------------|------------------|---|--|-----------------|--|-----------------|--|-----------------|---|------------------|---|---|---|

*Brachythecium rutabulum*

|  |  |  |                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  | III <sup>1</sup> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

*Calliergon cordifolium*

|  |  |   |  |                  |  |  |  |  |  |  |  |                 |  |  |  |  |  |
|--|--|---|--|------------------|--|--|--|--|--|--|--|-----------------|--|--|--|--|--|
|  |  | I |  | III <sup>+</sup> |  |  |  |  |  |  |  | II <sup>+</sup> |  |  |  |  |  |
|--|--|---|--|------------------|--|--|--|--|--|--|--|-----------------|--|--|--|--|--|

*Lophocolea heterophylla*

|  |  |   |  |   |  |   |  |  |  |  |  |  |  |  |   |                 |                 |   |
|--|--|---|--|---|--|---|--|--|--|--|--|--|--|--|---|-----------------|-----------------|---|
|  |  | I |  | I |  | I |  |  |  |  |  |  |  |  | I | II <sup>r</sup> | II <sup>+</sup> | I |
|--|--|---|--|---|--|---|--|--|--|--|--|--|--|--|---|-----------------|-----------------|---|

*Plagiothecium denticulatum*

|   |   |   |  |   |   |  |  |  |  |  |  |  |  |  |   |   |   |   |
|---|---|---|--|---|---|--|--|--|--|--|--|--|--|--|---|---|---|---|
| I | I | I |  | I | I |  |  |  |  |  |  |  |  |  | I | I | I | I |
|---|---|---|--|---|---|--|--|--|--|--|--|--|--|--|---|---|---|---|

*Pohlia nutans*

|                  |                 |   |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |
|------------------|-----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|
| III <sup>1</sup> | II <sup>+</sup> | I |  |  |  |  |  |  |  |  |  |  |  |  | I | I | I | I |
|------------------|-----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|

*Ptychostomum pseudotriquetrum*

|  |   |  |   |   |  |  |  |  |  |  |                 |   |                 |  |  |  |  |
|--|---|--|---|---|--|--|--|--|--|--|-----------------|---|-----------------|--|--|--|--|
|  | I |  | I | I |  |  |  |  |  |  | II <sup>r</sup> | I | II <sup>r</sup> |  |  |  |  |
|--|---|--|---|---|--|--|--|--|--|--|-----------------|---|-----------------|--|--|--|--|

*Sanionia uncinata*

|  |  |   |   |                 |   |   |  |  |   |   |                 |                 |                  |                 |                  |                  |   |   |
|--|--|---|---|-----------------|---|---|--|--|---|---|-----------------|-----------------|------------------|-----------------|------------------|------------------|---|---|
|  |  | I | I | II <sup>2</sup> | I | I |  |  | I | I | II <sup>+</sup> | II <sup>+</sup> | III <sup>r</sup> | II <sup>+</sup> | III <sup>+</sup> | III <sup>2</sup> | I | I |
|--|--|---|---|-----------------|---|---|--|--|---|---|-----------------|-----------------|------------------|-----------------|------------------|------------------|---|---|

*Sciuro-hypnum reflexum*

|  |  |   |   |  |                 |   |  |   |                  |                  |  |  |  |                 |                 |                 |                 |                 |
|--|--|---|---|--|-----------------|---|--|---|------------------|------------------|--|--|--|-----------------|-----------------|-----------------|-----------------|-----------------|
|  |  | I | I |  | II <sup>+</sup> | I |  | I | III <sup>+</sup> | III <sup>+</sup> |  |  |  | II <sup>+</sup> | II <sup>+</sup> | II <sup>+</sup> | II <sup>+</sup> | II <sup>r</sup> |
|--|--|---|---|--|-----------------|---|--|---|------------------|------------------|--|--|--|-----------------|-----------------|-----------------|-----------------|-----------------|

*Pagiochila porelloides*

|   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |
|---|--|---|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|
| I |  | I |  |  |  |  |  |  |  |  |  |  |  |  | I | I | I | I |
|---|--|---|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|

Number of syntaxa

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|

Low constancy species: *Abietinella abietina* (1-II<sup>+</sup>; 2-I); *Anomodon viticulosus* (10-I); *Brachytheciastrum velutinum* (8-I; 17-I; 18-I); *Bryum argenteum* (1-I; 2-II<sup>1</sup>); *Aulacomnium palustre* (5-I); *Blepharostoma trichophyllum* (5-I); *Campyliadelphus chrysophyllum* (8-I); *Campylophyllopsis*

*sommerfeltii* (4-I; 5-I; 9-I; 17-I); *Cephaloziella divaricata* (1-II); *Chiloscyphus pallescens* (3-I; 4-II); *C. polyanthos* (7-I); *Cirriphyllum piliferum* (8-I); *Climacium dendroides* (1-I; 4-I; 21-I); *Cratoneuron filicinum* (8-I); *Dichelima falcatum* (14-I); *Dicranum polysetum* (3-II<sup>2</sup>); *D. viride* (6-I; 9-I; 16-I); *Ditrichum pusillum* (4-I); *Drepanocladus aduncus* (14-I); *Fissidens bryoides* (4-I); *F. exilis* (4-I); *Herzogiella turphacea* (2-I); *Hygroamblystegium varium* (6-I; 15-I); *Lepidozia reptans* (6-I; 19-I); *Leptobryum piriforme* (1-I; 2-I; 4-I; 6-I); *Lophocolea minor* (3-I; 16-I; 19-I); *Marchantia polymorpha* (5-I); *Mnium stellare* (7-I); *Nyholmiella gymnostoma* (8-I; 11-I); *Oncophorus wahlenbergii* (17-I); *Plagiochila asplenioides* (3-I; 5-I); *Plagiothecium cavifolium* (7-I; 17-I); *Plagiomnium ellipticum* (4-I); *P. medium* (1-I; 3-I); *Pogonatum urnigerum* (1-I); *Pohlia annotina* (2-I); *Polytrichum commune* (3-I); *P. formosum* (5-I); *P. juniperinum* (17-I; 18-I; 19-I); *Pseudobryum cinclidioides* (5-I); *Ptychostomum capillare* (7-I); *P. crebberinum* (2-I; 12-I); *P. pallens* (2-I); *Rhizomnium pseudopunctatum* (18-I); *Rhodobryum roseum* (3-I); *Riccia fluitans* (5-I; 14-I); *Sciuro-hypnum curtum* (3-I; 17-I; 18-I); *S. starkei* (3-I); *Sphagnum girgensohnii* (3-I); *S. squarrosum* (3-I); *Stereodon pratensis* (3-I). *Tetraphis pellucida* (5-I; 17-I; 18-I; 19-I).

Explanation of numbers: 1 – *Racomitrio-Polytrichetum piliferi*; 2 – *Brachythecietum albicantis*; 3 – *Pleurozietum schreberi*; 4 – *Eurhynchietum swartzii*; 5 – *Calliergonello lindbergii-Rhizomnietum punctatis*; 6 – *Anomodontetum longifolii*; 7 – *Plagiomnio cuspidati-Homalietum trichomanoidis*; 8 – *Orthotrichetum speciosi*; 9 – *Pylaisielletto polyanthae-Leskeelletum nervosae*; 10 – *Pylaisietum polyanthae*; 11 – *Pylaisio polyanthae-Neckeretum pennatis*; 12 – *Syntrichio latifoliae-Leskeetum polycarpae* subass. *typicum*; 13 – *Syntrichio latifoliae-Leskeetum polycarpae* subass. *pylaisielletosum polyanthae*; 14 – *Syntrichio latifoliae-Leskeetum polycarpae* subass. *leptodictyetosum riparii*; 15 – *Platygyrietum repentis*; 16 – *Ptilidio pulcherrimi-Hypnetum pallescentis* subass. *typicum*; 17 – *Ptilidio pulcherrimi-Hypnetum pallescentis* subass. *callicladietosum haldaniana*; 18 – *Orthodicrano-Plagiothecietum laeti* subass. *typicum*; 19 – *Orthodicrano-Plagiothecietum laeti* subass. *eurhynchietosum pulchelli*.

Table 30. Bryophyte communities of class *Cladonio digitatae-Lepidozietea reptantis* in Nizhny Novgorod Province

|                                  | 4  | 2  | 1  | 3  | 5  | 6  | 7  | 8  | 9  | 10 |
|----------------------------------|----|----|----|----|----|----|----|----|----|----|
| Number of syntaxa                | 4  | 2  | 1  | 3  | 5  | 6  | 7  | 8  | 9  | 10 |
| Number of relives in syntaxa     | 15 | 19 | 15 | 15 | 17 | 22 | 22 | 15 | 27 | 23 |
| Mean cover, %                    | 91 | 84 | 83 | 83 | 81 | 91 | 90 | 91 | 89 | 96 |
| Total number of species          | 17 | 30 | 22 | 32 | 27 | 31 | 33 | 17 | 37 | 33 |
| Mean number of species in releve | 6  | 7  | 6  | 7  | 6  | 6  | 5  | 5  | 5  | 5  |

|                                 | Diagnostic species of associations |                 |                  |                 |   |   |   |   |   |   |
|---------------------------------|------------------------------------|-----------------|------------------|-----------------|---|---|---|---|---|---|
| <i>Plagiothecium cavifolium</i> | V <sup>4</sup>                     |                 |                  |                 |   |   |   |   | I | I |
| <i>Cephaloziella divaricata</i> | I                                  | IV <sup>+</sup> | I                |                 |   |   |   |   |   |   |
| <i>Pohlia nutans</i>            | II                                 | V <sup>3</sup>  | III <sup>2</sup> | II <sup>+</sup> | I | I | I | I | I | I |
| <i>Dicranella heteromalla</i>   | II <sup>1</sup>                    |                 | V <sup>4</sup>   | II <sup>1</sup> |   |   |   |   |   |   |
| <i>Atrichum undulatum</i>       | II <sup>+</sup>                    | II              | III <sup>1</sup> | IV <sup>2</sup> |   |   |   |   |   |   |
| <i>Atrichum flavisetum</i>      |                                    |                 | II <sup>1</sup>  | V <sup>3</sup>  |   |   |   |   |   |   |

|                               |                 |   |   |                |                  |                  |                  |                  |                 |
|-------------------------------|-----------------|---|---|----------------|------------------|------------------|------------------|------------------|-----------------|
| <i>Tetraphis pellucida</i>    |                 | I |   | V <sup>4</sup> |                  | I                |                  | I                | I               |
| <i>Amblystegium serpens</i>   | II <sup>r</sup> | I |   | I              | V <sup>4</sup>   | I                | III <sup>r</sup> | III <sup>1</sup> | I               |
| <i>Sanionia uncinata</i>      |                 |   | I | I              | II <sup>1</sup>  | V <sup>4</sup>   |                  | II <sup>1</sup>  | II <sup>+</sup> |
| <i>Sciuro-hypnum curtum</i>   |                 | I | I | I              | I                | I                | V <sup>3</sup>   |                  |                 |
| <i>Plagiomnium cuspidatum</i> |                 |   | I | I              | III <sup>+</sup> | I                | I                | V <sup>4</sup>   | II              |
| <i>Sciuro-hypnum reflexum</i> |                 |   |   | I              | II <sup>1</sup>  | III <sup>1</sup> |                  | II <sup>2</sup>  | V <sup>4</sup>  |

Diagnostic species of Cladonio–Lepidozietea reptantis

|                                    |                  |                  |                  |                 |                 |                 |                  |                  |                  |                 |
|------------------------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|-----------------|
| <i>Plagiothecium denticulatum</i>  | V <sup>2</sup>   | II <sup>1</sup>  |                  |                 | I               | I               | I                | I                | I                | I               |
| <i>Lophocolea heterophylla</i>     | III <sup>+</sup> | III <sup>+</sup> | I                |                 | II <sup>r</sup> | II <sup>r</sup> | I                | III <sup>+</sup> | I                | I               |
| <i>Plagiothecium laetum</i>        | III <sup>+</sup> | III <sup>1</sup> | I                | I               | IV <sup>1</sup> | I               |                  |                  |                  | I               |
| <i>Pohlia cruda</i>                | I                |                  | II <sup>2</sup>  | I               | I               |                 |                  |                  |                  |                 |
| <i>Isopaches bicrenatus</i>        |                  | I                | I                | I               |                 |                 |                  |                  |                  |                 |
| <i>Lepidozia reptans</i>           |                  |                  | I                |                 | II <sup>r</sup> |                 |                  |                  |                  |                 |
| <i>Calypogeia muelleriana</i>      |                  |                  | III <sup>+</sup> | I               |                 |                 |                  |                  |                  |                 |
| <i>Pagiochila porelloides</i>      |                  |                  | I                | I               | I               | I               | I                | I                | I                | I               |
| <i>Polytrichum formosum</i>        |                  |                  | I                | II <sup>+</sup> |                 |                 |                  |                  |                  |                 |
| <i>Polytrichum juniperinum</i>     | II <sup>+</sup>  | IV <sup>3</sup>  | II <sup>1</sup>  | II <sup>+</sup> | I               | I               |                  |                  | I                |                 |
| <i>Blepharostoma trichophyllum</i> |                  |                  |                  |                 | I               |                 |                  |                  |                  |                 |
| <i>Callicladium haldanianum</i>    |                  | I                | I                |                 | I               | I               |                  | I                |                  |                 |
| <i>Brachytheciastrum velutinum</i> |                  | I                |                  |                 |                 |                 | III <sup>+</sup> |                  |                  | I               |
| <i>Brachythecium salebrosum</i>    | I                | I                |                  | II <sup>+</sup> | I               | V <sup>3</sup>  | III <sup>1</sup> | V <sup>2</sup>   | III <sup>1</sup> | II <sup>+</sup> |
| <i>Sciuro-hypnum starkei</i>       |                  |                  |                  | II <sup>+</sup> | I               |                 | I                |                  |                  | I               |

Other species

|                                       |                  |                 |   |  |                 |   |                  |                 |                 |                 |
|---------------------------------------|------------------|-----------------|---|--|-----------------|---|------------------|-----------------|-----------------|-----------------|
| <i>Campylophyllopsis sommerfeltii</i> |                  | I               |   |  | II <sup>r</sup> | I | I                | II <sup>+</sup> | I               |                 |
| <i>Dicranum scoparium</i>             | III <sup>+</sup> | II <sup>+</sup> |   |  | II <sup>+</sup> | I | III <sup>+</sup> |                 | I               | II <sup>+</sup> |
| <i>Ptilidium pulcherrimum</i>         |                  | II <sup>1</sup> |   |  | II <sup>1</sup> | I | III <sup>1</sup> |                 |                 | II <sup>1</sup> |
| <i>Dicranum montanum</i>              |                  | I               |   |  | IV <sup>1</sup> | I | II <sup>+</sup>  |                 | I               | II <sup>1</sup> |
| <i>Eurhynchiastrum</i>                |                  |                 | I |  | I               | I | I                |                 | II <sup>1</sup> |                 |

|                                    |                  |                 |   |   |                 |                 |   |   |                  |                 |
|------------------------------------|------------------|-----------------|---|---|-----------------|-----------------|---|---|------------------|-----------------|
| <i>pulchellum</i>                  |                  |                 |   |   |                 |                 |   |   |                  |                 |
| <i>Hylocomiadelphus triquetrus</i> |                  |                 |   |   |                 | I               |   |   | I                | I               |
| <i>Jochenia pallescens</i>         |                  | I               |   | I |                 | I               | I | I | I                | I               |
| <i>Lewinskya speciosa</i>          |                  |                 |   |   |                 |                 | I |   |                  | I               |
| <i>Leptodictyum riparium</i>       |                  |                 |   |   |                 |                 |   |   | I                |                 |
| <i>Lophocolea minor</i>            |                  |                 |   |   |                 | I               |   |   |                  |                 |
| <i>Mnium stellare</i>              |                  | I               |   | I |                 |                 |   |   | I                |                 |
| <i>Neckera pennata</i>             |                  |                 |   |   |                 | I               |   |   | I                | II <sup>1</sup> |
| <i>Platygyrium repens</i>          |                  |                 |   |   |                 | I               | I |   |                  |                 |
| <i>Pleurozium schreberi</i>        | III <sup>+</sup> | II <sup>1</sup> |   | I | II <sup>r</sup> | II <sup>+</sup> | I | I | I                | I               |
| <i>Pseudoleskeella nervosa</i>     |                  |                 |   |   |                 | I               |   |   | II <sup>+</sup>  | II <sup>+</sup> |
| <i>Pylaisia polyantha</i>          |                  |                 |   |   |                 | II <sup>+</sup> | I |   | I                | II <sup>+</sup> |
| <i>Radula complanata</i>           |                  |                 |   |   |                 | I               | I |   |                  | II <sup>+</sup> |
| <i>Rhizomnium punctatum</i>        |                  | I               |   |   |                 | I               | I |   |                  |                 |
| <i>Rhodobryum roseum</i>           |                  |                 |   | I | I               |                 |   | I | III <sup>1</sup> |                 |
| Number of syntaxa                  | 4                | 2               | 1 | 3 | 5               | 6               | 7 | 8 | 9                | 10              |

Low constancy species: *Aulacomnium palustre* (7–I; 8–I); *Cephalozia bicuspidata* (3–II<sup>+</sup>); *Cephaloziella rubella* (2–I); *Ceratodon purpureus* (11–III<sup>+</sup>); *Chiloscyphus polyanthos* (1–I); *Cirriphyllum piliferum* (4–I); *Climacium dendroides* (7–I); *Dicranella cerviculata* (2–I); *Hygroamblystegium varium* (4–I); *Hylocomium splendens* (4–I); *Fissidens bryoides* (9–I); *Leptobryum piriforme* (2–I; 4–I); *Lophozia longidens* (9–I); *Mnium stellare* (4–I); *Plagiomnium ellipticum* (4–I; 9–I); *P. rostratum* (9–I); *Pogonatum urnigerum* (4–I); *Pohlia annotina* (4–I); *P. bulbifera* (4–I); *P. wahlenbergii* (9–I); *Polytrichum commune* (3–II; 4–I); *P. longisetum* (5–I); *Ptilium crista-castrensis* (9–I); *Ptychostomum capillare* (4–I); *P. moravicum* (4–I); *Rhizomnium pseudopunctatum* (9–I); *Scapania scandica* (2–I).

Explanation of numbers: 1 – *Plagiothecietum cavifolii*; 2 – *Pohlietum nutantis*; 3 – *Atricheto undulati*–*Dicranelletum heteromalli*; 4 – *Atrichetum flaviseti*–*undulati*; 5 – *Tetraphis pellucida* – community; 6 – *Brachythecio salebrosi*–*Amblystegietum juratzkani*; 7 – *Brachythecio salebrosi*–*Drepanocladetum uncinati*; 8 – *Brachythecietum salebrosi*–*curti*; 9 – *Brachythecietum salebrosi*–*reflexi* subass. *plagiomnietosum cuspidati*; 10 – *Brachythecietum salebrosi*–*reflexi* subass. *brachythecietosum reflexi*.

