Table S1. Changes in frequencies of species in all studied plots (number of occurrences, Nmax.=76).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| species | 1949 | 2018 | ꭓ2 | p-value | change |
| *Acer platanoides* | 70 | 74 | 0.111 | 0.739 | ↗ |
| *Actea spicata* | 6 | 1 | 3.571 | 0.059 | ↘ |
| ***Adoxa moschatellina*** | **6** | **0** | **6** | **0.014** | ↘ |
| ***Aegopodium podagraria*** | **73** | **51** | **3.903** | **0.048** | ↘ |
| ***Ajuga reptans*** | **50** | **20** | **12.857** | **<0.001** | ↘ |
| ***Anemone nemorosa*** | **44** | **25** | **5.232** | **0.022** | ↘ |
| ***Asarum europaeum*** | **45** | **13** | **17.655** | **<0.001** | ↘ |
| *Athyrium filix-femina* | 42 | 51 | 0.871 | 0.351 | ↗ |
| ***Brachypodium sylvaticum*** | **11** | **28** | **7.49** | **0.006** | ↗ |
| ***Calamagrostis arundinacea*** | **9** | **24** | **6.818** | **0.009** | ↗ |
| ***Carex digitata*** | **30** | **15** | **5** | **0.025** | ↘ |
| *Carex pilosa* | 52 | 35 | 3.322 | 0.068 | ↘ |
| ***Carex remota*** | **9** | **45** | **24** | **<0.001** | ↗ |
| *Carex sylvatica* | 11 | 22 | 3.667 | 0.056 | ↗ |
| *Carpinus betulus* | 49 | 58 | 0.757 | 0.384 | ↗ |
| ***Chrysosplenium alternifolium*** | **11** | **25** | **5.444** | **0.02** | ↗ |
| *Circea alpina* | 8 | 4 | 1.333 | 0.248 | ↘ |
| ***Circea lutetiana*** | **12** | **30** | **7.714** | **0.005** | ↗ |
| *Corylus avellana* | 28 | 24 | 0.308 | 0.579 | ↘ |
| ***Dactylis glomerata*** | **8** | **23** | **7.258** | **0.007** | ↗ |
| *Dactylorhizma fuchsii* | 5 | 1 | 2.667 | 0.102 | ↘ |
| ***Daphne mezereum*** | **27** | **4** | **17.065** | **<0.001** | ↘ |
| ***Dentaria bulbifera*** | **39** | **7** | **22.261** | **<0.001** | ↘ |
| *Deschampsia caespitosa* | 15 | 25 | 2.05 | 0.114 | ↗ |
| *Dryopteris carthusiana* | 62 | 59 | 0.074 | 0.785 | ↘ |
| *Dryopteris filix- mas* | 40 | 35 | 0.333 | 0.564 | ↘ |
| *Equisetum pratense* | 56 | 53 | 0.083 | 0.774 | ↘ |
| *Equisetum sylvaticum* | 9 | 16 | 1.96 | 0.162 | ↗ |
| *Euonymus europaea* | 2 | 5 | 1.286 | 0.257 | ↗ |
| *Festuca altissima* | 6 | 3 | 1 | 0.317 | ↘ |
| *Festuca gigantea* | 24 | 24 | 0 | 1 | - |
| ***Fragaria vesca*** | **21** | **0** | **21** | **<0.001** | ↘ |
| *Fraxinus excelsior* | 36 | 37 | 0.014 | 0.907 | ↗ |
| *Galeobdolon luteum* | 76 | 75 | 0.007 | 0.935 | ↘ |
| ***Galeopsis bifida*** | **0** | **9** | **9** | **0.003** | ↗ |
| *Galium odoratum* | 70 | 59 | 0.938 | 0.333 | ↘ |
| *Galium palustre* | 1 | 5 | 2.667 | 0.102 | ↗ |
| *Geranium robertianum* | 42 | 50 | 0.696 | 0.404 | ↗ |
| *Geum urbanum* | 29 | 27 | 0.071 | 0.789 | ↘ |
| *Glechoma hederacea* | 21 | 20 | 0.024 | 0.876 | ↘ |
| *Gymnocarpium dryopteris* | 36 | 33 | 0.13 | 0.718 | ↘ |
| ***Hepatica nobilis*** | **70** | **19** | **29.225** | **<0.001** | ↘ |
| *Impatiens noli-tangere* | 28 | 23 | 0.49 | 0.484 | ↘ |
| *Lapsana communis* | 8 | 14 | 1.636 | 0.201 | ↗ |
| ***Lathyrus vernus*** | **50** | **19** | **13.928** | **<0.001** | ↘ |
| *Luzula pilosa* | 6 | 6 | 0 | 1 | - |
| *Maiantheum bifolium* | 69 | 57 | 1.143 | 0.285 | ↘ |
| ***Malus sp.*** | **0** | **7** | **7** | **0.008** | ↗ |
| *Mercurialis perennis* | 4 | 9 | 1.923 | 0.166 | ↗ |
| *Milium effusum* | 48 | 62 | 1.782 | 0.182 | ↗ |
| ***Moehringia trinervia*** | **3** | **13** | **6.26** | **0.012** | ↗ |
| *Mycelis muralis* | 15 | 23 | 1.684 | 0.194 | ↗ |
| ***Neottia nidus-avis*** | **6** | **0** | **6** | **0.014** | ↘ |
| *Oxalis acetosella* | 73 | 72 | 0.007 | 0.934 | ↘ |
| ***Paris quadrifolia*** | **49** | **18** | **14.343** | **<0.001** | ↘ |
| ***Phegopteris connectilis*** | **11** | **0** | **11** | **0.001** | ↘ |
| ***Picea abies*** | **33** | **17** | **5.12** | **0.024** | ↘ |
| ***Poa nemoralis*** | **5** | **20** | **9** | **0.003** | ↗ |
| ***Polygonatum multiflorum*** | **58** | **37** | **4.642** | **0.031** | ↘ |
| ***Populus tremula*** | **1** | **7** | **4.05** | **0.034** | ↗ |
| ***Pulmonaria obscura*** | **27** | **2** | **21.552** | **<0.001** | ↘ |
| *Quercus robur* | 46 | 40 | 0.419 | 0.518 | ↘ |
| *Ranunculus cassubicus* | 7 | 5 | 0.333 | 0.564 | ↘ |
| *Ranunculus lanuginosus* | 54 | 45 | 0.818 | 0.366 | ↘ |
| *Ranunculus repens* | 5 | 9 | 1.143 | 0.285 | ↗ |
| *Rubus idaeus* | 36 | 41 | 0.325 | 0.569 | ↗ |
| *Rubus saxatilis* | 14 | 7 | 2.333 | 0.127 | ↘ |
| ***Rumex obtusifolius*** | **2** | **9** | **4.455** | **0.035** | ↗ |
| ***Rumex sanguineus*** | **0** | **5** | **5** | **0.025** | ↗ |
| ***Sanicula europaea*** | **37** | **21** | **4.414** | **0.036** | ↘ |
| *Sorbus aucuparia* | 24 | 17 | 1.195 | 0.274 | ↘ |
| *Stachys sylvatica* | 27 | 29 | 0.071 | 0.789 | ↗ |
| *Stellaria holostea* | 71 | 70 | 0.007 | 0.933 | ↘ |
| ***Stellaria media*** | **0** | **7** | **7** | **0.008** | ↗ |
| ***Stellaria nemorum*** | **27** | **58** | **11.306** | **0.001** | ↗ |
| *Tilia cordata* | 48 | 50 | 0.041 | 0.84 | ↗ |
| *Ulmus glabra* | 23 | 34 | 2.123 | 0.145 | ↗ |
| *Urtica dioica* | 43 | 52 | 0.853 | 0.356 | ↗ |
| *Veronica chamaedrys* | 7 | 4 | 0.818 | 0.366 | ↘ |
| ***Viola mirabilis*** | **7** | **1** | **4.05** | **0.034** | ↘ |
| *Viola silvesrtis* | 69 | 52 | 2.388 | 0.122 | ↘ |

Table S2. Changes in frequencies [% of plots occupied] of plant species in three studied types of oak-lime-hornbeam forest in the Białowieża Forest, Eastern Poland.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Species | *Q-C caricetosum pilosae* | | *Q-C stachyetosum silvaticae* | | *Q-C typicum* | |
| 1949 | 2018 | 1949 | 2018 | 1949 | 2018 |
| *Acer platanoides* | 96 | 100 | 86.36 | 90.91 | 89.66 | 96.55 |
| *Actea spicata* | 8 | 0 | 4.55 | 4.55 | 10.34 | 0.00 |
| *Adoxa moschatellina* | 4 | 0 | 9.09 | 0.00 | 10.34 | 0.00 |
| *Aegopodium podagraria* | 96 | 60 | 95.45 | 68.18 | 93.10 | 72.41 |
| *Agrostis sp.* | 0 | 0 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Ajuga reptans* | 68 | 24 | 68.18 | 31.82 | 62.07 | 24.14 |
| *Alisma plantago-aquatica* | 0 | 0 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Alnus glutinosa* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Anemone nemorosa* | 76 | 28 | 50.00 | 31.82 | 48.28 | 37.93 |
| *Anthriscus sylvestris* | 0 | 4 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Arctium nemorosum* | 0 | 0 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Asarum europaeum* | 28 | 16 | 81.82 | 18.18 | 65.52 | 17.24 |
| *Athyrium filix-femina* | 48 | 68 | 63.64 | 72.73 | 55.17 | 62.07 |
| *Betula pendula* | 0 | 0 | 0.00 | 0.00 | 10.34 | 0.00 |
| *Bidens cernua* | 0 | 0 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Bidens frondosa* | 0 | 0 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Brachypodium sylvaticum* | 0 | 28 | 31.82 | 36.36 | 13.79 | 44.83 |
| *Calamagrostis arundinacea* | 28 | 32 | 4.55 | 22.73 | 3.45 | 34.48 |
| *Campanula trachelium* | 0 | 0 | 4.55 | 0.00 | 3.45 | 0.00 |
| *Cardamine amara* | 0 | 4 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Cardamine flexuosa* | 0 | 0 | 0.00 | 9.09 | 0.00 | 3.45 |
| *Cardamine impatiens* | 0 | 0 | 0.00 | 4.55 | 0.00 | 3.45 |
| *Carex brizoides* | 4 | 0 | 0.00 | 0.00 | 3.45 | 0.00 |
| *Carex digitata* | 56 | 28 | 22.73 | 13.64 | 37.93 | 17.24 |
| *Carex elongata* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Carex pilosa* | 100 | 72 | 36.36 | 18.18 | 62.07 | 44.83 |
| *Carex remota* | 8 | 76 | 31.82 | 59.09 | 0.00 | 44.83 |
| *Carex sylvatica* | 4 | 28 | 22.73 | 36.36 | 17.24 | 24.14 |
| *Carpinus betulus* | 64 | 76 | 59.09 | 81.82 | 68.97 | 68.97 |
| *Chrysosplenium alternifolium* | 0 | 28 | 40.91 | 40.91 | 6.90 | 31.03 |
| *Circea alpina* | 0 | 0 | 27.27 | 13.64 | 6.90 | 3.45 |
| *Circea lutetiana* | 0 | 28 | 45.45 | 63.64 | 6.90 | 31.03 |
| *Cirsium oleraceum* | 0 | 0 | 4.55 | 0.00 | 0.00 | 0.00 |
| *Convalaria majalis* | 0 | 0 | 0.00 | 4.55 | 0.00 | 3.45 |
| *Corydalis solida* | 8 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Corylus avellana* | 32 | 40 | 27.27 | 31.82 | 48.28 | 24.14 |
| *Crategus sp.* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Crepis paludosa* | 0 | 0 | 13.64 | 13.64 | 0.00 | 0.00 |
| *Cystopteris fragilis* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Dactylis glomerata* | 12 | 40 | 13.64 | 18.18 | 6.90 | 31.03 |
| *Dactylorhizma fuchsii* | 4 | 0 | 4.55 | 4.55 | 10.34 | 0.00 |
| *Daphne mezereum* | 48 | 4 | 22.73 | 13.64 | 31.03 | 0.00 |
| *Dentaria bulbifera* | 44 | 0 | 36.36 | 9.09 | 65.52 | 17.24 |
| *Deschampsia caespitosa* | 16 | 48 | 31.82 | 36.36 | 13.79 | 17.24 |
| *Dryopteris carthusiana* | 80 | 84 | 100.00 | 68.18 | 65.52 | 75.86 |
| *Dryopteris dilatata* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Dryopteris filix- mas* | 60 | 44 | 54.55 | 50.00 | 44.83 | 44.83 |
| *Elymus europaeus* | 0 | 0 | 13.64 | 0.00 | 0.00 | 0.00 |
| *Epilobium montanum* | 4 | 0 | 4.55 | 0.00 | 3.45 | 0.00 |
| *Epilobium roseum* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Equisetum arvense* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Equisetum pratense* | 72 | 72 | 72.73 | 63.64 | 75.86 | 72.41 |
| *Equisetum sylvaticum* | 12 | 20 | 22.73 | 40.91 | 3.45 | 6.90 |
| *Euonymus europaea* | 4 | 4 | 0.00 | 18.18 | 3.45 | 0.00 |
| *Euonymus verrucosa* | 0 | 4 | 4.55 | 0.00 | 0.00 | 0.00 |
| *Festuca altissima* | 12 | 4 | 4.55 | 9.09 | 6.90 | 0.00 |
| *Festuca gigantea* | 20 | 28 | 54.55 | 40.91 | 24.14 | 27.59 |
| *Ficaria verna* | 4 | 0 | 0.00 | 0.00 | 3.45 | 0.00 |
| *Fragaria vesca* | 28 | 0 | 13.64 | 0.00 | 37.93 | 0.00 |
| *Frangula alnus* | 0 | 0 | 0.00 | 0.00 | 0.00 | 6.90 |
| *Fraxinus excelsior* | 28 | 32 | 77.27 | 63.64 | 41.38 | 51.72 |
| *Galeobdolon luteum* | 96 | 96 | 100.00 | 100.00 | 100.00 | 100.00 |
| *Galeopsis bifida* | 0 | 12 | 0.00 | 18.18 | 0.00 | 6.90 |
| *Galeopsis pubescens* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Galium odoratum* | 84 | 76 | 86.36 | 63.64 | 100.00 | 89.66 |
| *Galium palustre* | 0 | 12 | 4.55 | 9.09 | 0.00 | 0.00 |
| *Geranium robertianum* | 20 | 48 | 77.27 | 77.27 | 68.97 | 72.41 |
| *Geum urbanum* | 16 | 20 | 63.64 | 45.45 | 37.93 | 41.38 |
| *Glechoma hederacea* | 24 | 24 | 50.00 | 31.82 | 13.79 | 10.34 |
| *Gymnocarpium dryopteris* | 24 | 48 | 54.55 | 27.27 | 62.07 | 51.72 |
| *Hedera helix* | 0 | 0 | 9.09 | 0.00 | 0.00 | 0.00 |
| *Hepatica nobilis* | 88 | 20 | 90.91 | 13.64 | 93.10 | 37.93 |
| *Hieracium lachenalii* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Holcus lanatus* | 0 | 0 | 0.00 | 9.09 | 0.00 | 0.00 |
| *Hypochaeris maculata* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Impatiens noli-tangere* | 12 | 32 | 72.73 | 36.36 | 31.03 | 24.14 |
| *Isophyrum thalictroides* | 4 | 0 | 0.00 | 0.00 | 3.45 | 0.00 |
| *Juncus effusus* | 0 | 4 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Lamium maculatum* | 0 | 0 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Lapsana communis* | 4 | 12 | 27.27 | 27.27 | 3.45 | 17.24 |
| *Lathrea squamaria* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Lathyrus vernus* | 72 | 8 | 59.09 | 40.91 | 62.07 | 27.59 |
| *Luzula pilosa* | 20 | 8 | 0.00 | 18.18 | 3.45 | 0.00 |
| *Lycopus europeus* | 0 | 4 | 0.00 | 9.09 | 0.00 | 0.00 |
| *Lysymachia nummularia* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Lysymachia thyrsiflora* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Lysymachia vulgaris* | 0 | 4 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Lythrum salicaria* | 0 | 0 | 0.00 | 9.09 | 0.00 | 0.00 |
| *Maiantheum bifolium* | 100 | 88 | 77.27 | 59.09 | 89.66 | 72.41 |
| *Malus sp.* | 0 | 4 | 0.00 | 13.64 | 0.00 | 10.34 |
| *Melica nutans* | 8 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Melittis melissophyllum* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Mercurialis perennis* | 0 | 8 | 18.18 | 22.73 | 0.00 | 6.90 |
| *Milium effusum* | 60 | 88 | 50.00 | 59.09 | 72.41 | 93.10 |
| *Moehringia trinervia* | 8 | 20 | 0.00 | 13.64 | 3.45 | 17.24 |
| *Monotropa hypopitys* | 8 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Mycelis muralis* | 12 | 36 | 22.73 | 22.73 | 20.69 | 31.03 |
| *Myosotis palustris* | 0 | 4 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Neottia nidus-avis* | 8 | 0 | 0.00 | 0.00 | 13.79 | 0.00 |
| *Oxalis acetosella* | 92 | 100 | 95.45 | 90.91 | 96.55 | 89.66 |
| *Padus avium* | 0 | 0 | 13.64 | 0.00 | 0.00 | 0.00 |
| *Paris quadrifolia* | 60 | 20 | 54.55 | 27.27 | 75.86 | 24.14 |
| *Phegopteris connectilis* | 28 | 0 | 4.55 | 0.00 | 10.34 | 0.00 |
| *Phyteuma spicatum* | 4 | 0 | 0.00 | 0.00 | 3.45 | 0.00 |
| *Picea abies* | 48 | 32 | 36.36 | 13.64 | 44.83 | 17.24 |
| *Plathantera bifolia* | 12 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Poa nemoralis* | 12 | 20 | 4.55 | 40.91 | 3.45 | 20.69 |
| *Poa palustris* | 0 | 0 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Poa trivialis* | 0 | 0 | 0.00 | 0.00 | 0.00 | 6.90 |
| *Poaceae* | 0 | 0 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Polygonatum multiflorum* | 68 | 68 | 68.18 | 45.45 | 89.66 | 34.48 |
| *Polygonatum odoratum* | 4 | 4 | 0.00 | 4.55 | 0.00 | 6.90 |
| *Polygonum hydropiper* | 0 | 0 | 0.00 | 9.09 | 0.00 | 3.45 |
| *Populus tremula* | 0 | 8 | 4.55 | 9.09 | 0.00 | 6.90 |
| *Prunella vulgaris* | 4 | 8 | 9.09 | 0.00 | 0.00 | 0.00 |
| *Prunus cerasifera* | 0 | 0 | 0.00 | 4.55 | 0.00 | 3.45 |
| *Pteridium aquilinum* | 0 | 0 | 0.00 | 0.00 | 0.00 | 10.34 |
| *Pulmonaria obscura* | 32 | 4 | 45.45 | 4.55 | 31.03 | 0.00 |
| *Pyrus communis* | 4 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Quercus robur* | 64 | 52 | 54.55 | 50.00 | 62.07 | 51.72 |
| *Ranunculus cassubicus* | 4 | 8 | 18.18 | 13.64 | 6.90 | 0.00 |
| *Ranunculus lanuginosus* | 52 | 48 | 81.82 | 72.73 | 75.86 | 58.62 |
| *Ranunculus repens* | 0 | 12 | 22.73 | 18.18 | 0.00 | 6.90 |
| *Rubus idaeus* | 44 | 52 | 59.09 | 59.09 | 37.93 | 48.28 |
| *Rubus saxatilis* | 24 | 4 | 13.64 | 13.64 | 17.24 | 10.34 |
| *Rumex crispus* | 0 | 4 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Rumex obtusifolius* | 0 | 4 | 4.55 | 27.27 | 3.45 | 6.90 |
| *Rumex sanguineus* | 0 | 4 | 0.00 | 9.09 | 0.00 | 6.90 |
| *Sanicula europaea* | 44 | 20 | 36.36 | 18.18 | 62.07 | 41.38 |
| *Scilla bifolia* | 0 | 0 | 0.00 | 0.00 | 3.45 | 0.00 |
| *Scrophularia nodosa* | 8 | 0 | 9.09 | 4.55 | 0.00 | 3.45 |
| *Scutellaria galericulata* | 0 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Solanum dulcamara* | 0 | 4 | 0.00 | 9.09 | 0.00 | 0.00 |
| *Solidago virga-aurea* | 0 | 0 | 4.55 | 0.00 | 3.45 | 0.00 |
| *Sorbus aucuparia* | 48 | 24 | 22.73 | 22.73 | 20.69 | 17.24 |
| *Stachys sylvatica* | 20 | 24 | 68.18 | 40.91 | 24.14 | 48.28 |
| *Stellaria holostea* | 92 | 88 | 90.91 | 90.91 | 93.10 | 96.55 |
| *Stellaria media* | 0 | 4 | 0.00 | 13.64 | 0.00 | 10.34 |
| *Stellaria nemorum* | 16 | 64 | 72.73 | 90.91 | 24.14 | 75.86 |
| *Taraxacum* | 0 | 4 | 0.00 | 0.00 | 0.00 | 6.90 |
| *Tilia cordata* | 76 | 72 | 45.45 | 54.55 | 65.52 | 68.97 |
| *Torilis japonica* | 0 | 0 | 9.09 | 0.00 | 0.00 | 0.00 |
| *Trientalis europaea* | 4 | 4 | 0.00 | 4.55 | 0.00 | 3.45 |
| *Ulmus glabra* | 24 | 28 | 27.27 | 54.55 | 37.93 | 51.72 |
| *Urtica dioica* | 16 | 48 | 86.36 | 72.73 | 68.97 | 82.76 |
| *Vaccinium myrtilus* | 0 | 4 | 0.00 | 0.00 | 0.00 | 3.45 |
| *Veronica beccabunga* | 0 | 0 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Veronica chamaedrys* | 16 | 8 | 0.00 | 0.00 | 10.34 | 6.90 |
| *Veronica officinalis* | 4 | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Viburnum opulus* | 0 | 0 | 4.55 | 0.00 | 0.00 | 0.00 |
| *Vicia sepium* | 4 | 4 | 0.00 | 4.55 | 0.00 | 0.00 |
| *Vicia sylvatica* | 0 | 0 | 0.00 | 0.00 | 10.34 | 0.00 |
| *Viola mirabilis* | 12 | 0 | 4.55 | 4.55 | 10.34 | 0.00 |
| *Viola r/r \** | 96 | 68 | 81.82 | 68.18 | 89.66 | 68.97 |

Table S3. Changes in frequencies of tree species in stand in all studied plots (number of occurrences, N=76).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | 1949 | 2018 | ꭓ2 | p-value |
| ***Acer platanoides*** | **59** | **19** | **20.513** | **<0.001** |
| ***Alnus glutinosa*** | **0** | **5** | **5** | **0.02** |
| *Betula pendula* | 5 | 1 | 2.667 | 0.10 |
| *Carpinus betulus* | 75 | 75 | 0 | 1 |
| ***Fraxinus excelsior*** | **21** | **5** | **9.846** | **0.002** |
| ***Picea abies*** | **74** | **49** | **5.081** | **0.02** |
| *Populus tremula* | 0 | 2 | 2 | 0.16 |
| ***Quercus robur*** | **34** | **13** | **9.383** | **0.002** |
| *Sorbus aucuparia* | 1 | 1 | 0 | 1 |
| *Ulmus glabra* | 3 | 1 | 1 | 0.32 |
| *Tilia cordata* | 47 | 66 | 3.195 | 0.07 |