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VASCULAR PLANTS FLORA OF THE RAILWAY GROUNDS OF ŁASK

Abstract: In the paper a list and general characterization of vascular plants flora recorded on railway grounds of Łask is presented. The great diversity of habitats within the railway grounds as well as their readiness to accept numerous introduced species result in high variety of vascular plants there. This flora consists of 369 taxa.

Key words: flora, vascular plants, railway grounds, Łask, Central Poland

1. INTRODUCTION

The vascular plants flora of the railway grounds of Łask has not yet been the subject of complex research. Fairly abundant data on vascular plants occurrence on the railway grounds of this town is given by KARKACZ (1978), MOWSZOWICZ (1960, 1978), SOWA (1966, 1967, 1969, 1971) and SUWARA (2003). The floristic investigation, carried out on the railway grounds of Łask in 2003–2004, enriched the list of taxa of this type flora (WARCHOLIŃSKA, SUWARA 2004).

The main aim of the floristic research carried out in 2003–2004 was compiling an updated list of vascular plants occurring in diverse habitats of Łask railway grounds and working out a general characterization of the investigated flora.

2. MATERIALS AND METHODS

Data contained in the studies cited in the „Introduction" and the results of investigations carried out in 2003–2004 were used to assess the state of the flora of Łask railway grounds. On the basic of data analysis a list of taxa

occurring in the investigated flora of Łask railway grounds was compiled and its general characterization was carried out.

The systematic arrangement of taxa of the list was accepted after SZAFER et al. (1976), while the botanic nomenclature after MIREK et al. (2002). Studies by JACKOWIAK (1990), JANOWSKA (2002), MOWSZOWICZ (1975), RUTKOWSKI (1998), WARCHOLIŃSKA (1993, 2003, 2004, 2005), were also employed.

In the list of taxa, the following data were subsequently given their Latin names:

* – Plants recorded in 2003–2004;
- Constancy (**Shl** – Short living plants, **Per** – Perennial plants);
- Life form (**M** – Megaphanerophytes, **N** – Nanophanerophytes, **Ch** – Woody chamaephytes, **C** – Herbaceous chamaephytes, **H** – Hemicryptophytes, **G** – Geophytes, **T** – Therophytes);
- Geographic-historical group (**Ap** – Apophytes; Anthropophytes: **Ar** – Archaeopchytes, **Ep** – Epoecophytes, **He** – Hemiagriophytes, **Ho** – Holoagriophytes, **Ef** – Ephemerophytes, **Er** – Ergaziophygophytes);
- Frequency classes (very rare, rare, rather frequent, frequent, common).

While determining the properties of vascular plants flora apecies the following studies, among others, were employed: JACKOWIAK (1990), JANOWSKA (2002), KORNAŚ (1968), KORNAŚ et al. (1959), LATOWSKI (1981, 2004), MIREK et al. (2002), WARCHOLIŃSKA (2003, 2004, 2005), ZAJĄC, ZAJĄC (1975), ZARZYCKI et al. (2002).

3. RESULTS

3.1. List of taxa

Polypodiaceae

*1. *Dryopteris filix-mas* (L.) Schott – Per, H, Ap, very rare
*2. *Pteridium aquilinum* (L.) Kuhn – Per, G, Ap, rare

Equisetaceae

3. *Equisetum arvense* L. – Per, G, Ap, common
*4. *E. sylvaticum* L. – Per, G, Ap, rather frequent
*5. *E. palustre* L. – Per, G, Ap, very rare

Pinaceae

6. *Pinus sylvestris* L. – Per, M, Ap, rare

Cupressaceae

*7. *Juniperus communis* L. – Per, N, Ap, rare
8. *Thuja occidentalis* L. – Per, N, Er, very rare

Betulaceae

9. *Betula pendula* Roth – Per, M, Ap, rather frequent
*10. *Alnus glutinosa* (L.) Gaertn. – Per, M, Ap, very rare
11. *Carpinus betulus* L. – Per, M, Ap, very rare
*12. *Corylus avellana* L. – Per, N, Ap, very rare

Fagaceae

13. *Quercus robur* L. – Per, M, Ap, rare
*14. *Q. rubra* L. – Per, M, He, rare

Salicaceae

15. *Populus alba* L. – Per, M, Ap, rare
*16. *P. tremula* L. – Per, M, Ap, rather frequent
*17. *Salix fragilis* L. – Per, M, Ap, very rare
*18. *S. alba* L. – Per, N, Ap, rare
*19. *S. cinerea* L. – Per, N, Ap, very rare

Cannabaceae

*20. *Humulus lupulus* L. – Per, N, Ap, very rare

Urticaceae

21. *Urtica urens* L. – Shl, T, Ar, rather frequent
22. *Urtica dioica* L. – Per, H, Ap, rather frequent

Ulmaceae

23. *Ulmus laevis* Pall. – Per, M, Ap, very rare

Polygonaceae

*24. *Rumex conglomeratus* Murray – Per, H, Ap, very rare
*25. *R. obtusifolius* L. – Per, H, Ap, rare
*26. *R. crispus* L. – Per, H, Ap, frequent
27. *R. acetosa* L. – Per, H, Ap, rather frequent
28. *R. acetosella* L. – Per, G, Ap, frequent
*29. *Polygonum bistorta* L. – Per, G, Ap, very rare
30. *P. amphibium* L. – Per, G, Ap, rare
31. *P. persicaria* L. – Shl, T, Ap, frequent
32. *P. lapathifolium* L. subsp. *pallidum* (With.) Fr. – Shl, T, Ap, frequent
*33. *P. lapathifolium* L. subsp. *lapathifolium* – Shl, T, Ap, rare.
*34. *P. hydropiper* L. – Shl, T, Ap, rare
35. *P. aviculare* L. – Shl, T, Ap, common
*36. *Reynoutria sachalinensis* (F. Shmidt) Nakai – Per, G, Ep, very rare
37. *R. japonica* Houtt. – Per, G, Ep, rare

*38. *Fallopia convolvulus* (L.) Á. Löve – Shl, T, Ar, common
*39. *F. dumetorum* (L.) Holub – Shl, T, Ap, very rare

Chenopodiaceae

*40. *Kochia scoparia* (L.) Schrad. – Shl, T, Ef, very rare
41. *Chenopodium hybridum* L. – Shl, T, Ar, rare
*42. *Ch. urbicum* L. – Shl, T, Ar, very rare
43. *Ch. album* L. – Shl, T, Ap, common
*44. *Ch. glaucum* L. – Shl, T, Ap, very rare
*45. *Ch. bonus-henricus* L. – Per, C, Ar, very rare
*46. *Artiplex hortensis* L. – Shl, T, Ep, very rare
47. *A. patula* L. – Shl, T, Ap, frequent
*48. *Salsola kali* L. subsp. *ruthenica* (Iljin) Soó – Shl, T, Ep, very rare

Amaranthaceae

49. *Amaranthus retroflexus* L. – Shl, T, Ep, frequent
*50. *A. lividus* L. – Shl, T, Ep, rare

Caryophyllaceae

51. *Dianthus deltoides* L. – Per, H, Ap, rare
*52. *Gypsophila muralis* L. – Shl, T, Ap, rather frequent
53. *Saponaria officinalis* L. – Per, H, Ap, rather frequent
54. *Melandrium album* (Mill.) Garcke – Shl, H, Ap, frequent
55. *Silene vulgaris* (Moench) Garcke – Per, H, Ap, frequent
56. *Arenaria serpyllifolia* L. – Shl, T, Ap, frequent
57. *Stellaria media* (L.) Vill. – Shl, T, Ap, frequent
58. *S. graminea* L. – Per, H, Ap, rather frequent
59. *Cerastium arvense* L. s. str. – Per, C, Ap, frequent
60. *C. holosteoides* Fr. Emend. Hyl. – Per, C, Ap, frequent
*61. *Sagina procumbens* L. – Per, H, Ap, rather frequent
*62. *Scleranthus perennis* L. – Per, H, Ap, rare
63. *S. annuus* L. – Shl, T, Ar, frequent
*64. *Spergula arvensis* L. – Shl, T, Ar, frequent
65. *S. morisonii* Boreau – Shl, T, Ap, very rare
66. *Spergularia rubra* (L.) J. Presl & C. Presl – Shl, H, Ap, rather frequent
67. *Herniaria glabra* L. – Shl, H, Ap, rather frequent

Euphorbiaceae

68. *Euphorbia peplus* L. – Shl, T, Ar, rare
69. *E. helioscopia* L. – Shl, T, Ar, rather frequent
70. *E. cyparissias* L. – Per, H, Ap, frequent

Ranunculaceae

71. *Ranunculus bulbosus* L. – Per, G, Ap, rather frequent
72. *R. repens* L. – Per, H, Ap, rather frequent
73. *R. acris* L. s. str. – Per, H, Ap, frequent

Papaveraceae

*74. *Papaver argemone* L. – Shl, T, Ar, rare
75. *P. dubium* L. – Shl, T, Ar, rather frequent
76. *P. rhoeas* L. – Shl, T, Ar, rare
*77. *P. somniferum* L. – Shl, T, Er, rare
*78. *Chelidonium majus* L. – Per, H, Ap, frequent
*79. *Fumaria officinalis* L. – Shl, T, Ar, very rare

Brassicaceae

80. *Rorippa sylvestris* (L.) Besser – Per, H, Ap, rather frequent
*81. *Barbarea vulgaris* R. Br. – Shl, T, Ap, very rare
*82. *Cardaminopsis arenosa* (L.) Hayek – Shl, H, Ap, rare
83. *Sisymbrium officinale* (L.) Scop. – Shl, T, Ar, frequent
84. *S. altissimum* L. – Shl, H, Ep, rare
85. *S. loeselii* L. – Shl, T, Ep, frequent
86. *Descurainia sophia* (L.) Webb ex Prantl – Shl, T, Ar, common
*87. *Arabidopsis thaliana* (L.) Heynh. – Shl, T, Ap, rather frequent
*88. *Alliaria petiolata* (M. Bieb.) Cavara & Grande – Shl, T, Ap, very rare
89. *Erysimum cheiranthoides* L. – Shl, T, Ar, rather frequent
*90. *Brassica napus* L. – Shl, T, Er, very rare
91. *Sinapis arvensis* L. – Shl, T, Ar, rare
*92. *S. alba* L. – Shl, T, Er, rare
*93. *Diplotaxis muralis* (L.) DC. – Shl, T, Ep, rare
94. *Berteroa incana* (L.) DC. – Shl, T, Ap, common
95. *Erophila verna* (L.) Chevall. – Shl, T, Ap, frequent
96. *Armoracia rusticana* P. Gaertn., B. Mey. & Scherb. – Per, G, Ar, rare
*97. *Thlaspi arvense* L. – Shl, T, Ar, very rare
98. *Lepidium campestre* (L.) R. Br. – Shl, T, Ar, very rare
99. *L. ruderale* L. – Shl, T, Ar, frequent
100. *L. densiflorum* Schrad. – Shl, T, Ep, very rare
101. *Capsella bursa-pastoris* (L.) Medik. – Shl, T, Ar, common
102. *Raphanus raphanistrum* L. – Shl, T, Ar, frequent
*103. *R. sativus* L. – Shl, T, Er, rather frequent

Resedaceae

104. *Reseda lutea* L. – Shl, T, Ap, rare

Violaceae

105. *Viola odorata* L. – Per, H, Ap, rare
106. *V. tricolor* L. s. str. – Shl, T, Ap, frequent
107. *V. arvensis* Murray – Shl, T, Ar, frequent

Clusiaceae

*108. *Hypericum perforatum* L. – Per, H, Ap, rather frequent
*109. *H. maculatum* Crantz – Per, H, Ap, very rare

Crassulaceae

*110. *Sedum maximum* (L.) Hoffm. – Per, G, Ap, very rare
111. *S. acre* L. – Per, C, Ap, rather frequent

Saxifragaceae

*112. *Saxifraga granulata* L. – Per, H, Ap, rare
*113. *Ribes uva-crispa* L. – Per, N, Er, very rare

Rosaceae

114. *Rosa rugosa* Thunb. – Per, N, Ar, rare
115. *R. canina* L. – Per, N, Ap, rather frequent
*116. *R. rubiginosa* L. – Per, N, Ap, very rare
*117. *Rubus saxatilis* L. – Per, H, Ap, rare
*118. *R. idaeus* L. – Per, N, Ap, rare
119. *R. caesius* L. – Per, N, Ap, frequent
120. *Fragaria vesca* L. – Per, H, Ap, very rare
121. *Potentilla argentea* L. s. str. – Per, H, Ap, very frequent
*122. *P. collina* Wibel s. str. – Per, H, Ap, very rare
*123. *P. arenaria* Borkh. – Per, H, Ap, very rare
124. *P. reptans* L. – Per, H, Ap, very rare
125. *P. anserina* L. – Per, H, Ap, frequent
*126. *Alchemilla monticola* Opiz – Per, H, Ap, very rare
127. *Geum urbanum* L. – Per, H, Ap, frequent
128. *Agrimonia eupatoria* L. – Per, H, Ap, very rare
*129. *Crataegus monogyna* Jacq. – Per, N, Ap, very rare
*130. *Pyrus communis* L. – Per, M, Ar, very rare
*131. *Malus sylvestris* Mill. – Per, M, Ap, very rare
*132. *Sorbus aucuparia* L. Emend. Hedl. – Per, M, Ap, very rare
*133. *Prunus spinosa* L. – Per, N, Ap, very rare
134. *P. domestica* L. subsp. *insititia* (L.) Bonnier & Layens – Per, N, Er, very rare
*135. *Padus serotina* (Ehrh.) Borkh. – Per, N, Ep, rare
136. *Cerasus vulgaris* Mill. subsp. *acida* (Dumort.) Asch. & Graebn. – Per, N, Er, very rare

Fabaceae

137. *Sarothamnus scoparius* (L.) W. D. J. Koch – Per, N, Ap, rare
138. *Lupinus polyphyllus* Lindl. – Per, H, He, very rare
*139. *Medicago falcata* L. – Per, H, Ap, very rare
140. *M. sativa* L. – Per, H, Er, rather frequent
141. *M. lupulina* L. – Shl, T, Ap, frequent
142. *Melilotus alba* Medik. – Shl, H, Ap, frequent
143. *M. officinalis* (L.) Pall. – Shl, H, Ap, rather frequent
*144. *Trifolium arvense L. – Shl, T, Ap, rather frequent*
*145. *T. dubium* Sibth. – Shl, T, Ap, rare
146. *T. campestre* Schreb. – Shl, T, Ap, rather frequent
147. *T. repens* L. – Per, H, Ap, frequent
148. *T. pratense* L. – Per, H, Ap, rather frequent
149. *T. medium* L. – Per, H, Ap, rare
*150. *Lotus uliginosus* Schkuhr – Per, H, Ap, rare
151. *L. corniculatus* L. – Per, H, Ap, frequent
152. *Robinia pseudacacia* L. – Per, M, He, rather frequent
153. *Caragana arborescens* Lam. – Per, N, Er, very rate
*154. *Astragalus glycyphyllos* L. – Per, H, Ap, very rare
155. *Coronilla varia* L. – Per, H, Ap, frequent
156. *Ornithopus sativus* Brot. – Shl, T, Er, very rare
157. *Vicia hirsuta* (L.) S. F. Gray – Shl, T, Ar, frequent
*158. *V. tetrasperma* (L.) Schreb. – Shl, T, Ar, rather frequent
159. *V. cracca* L. – Per, H, Ap, frequent
160. *V. villosa* Roth – Shl, T, Ar, rather frequent
*161. *V. sepium* L. – Per, H, Ap, rare
162. *V. sativa* L. – Shl, T, Ar, rare
163. *V. angustifolia* L. – Shl, T, Ar, frequent
*164. *Lathyrus sylvestris* L. – Per, H, Ap, very rare
*165. *L. pratensis* L. – Per, H, Ap, rare
166. *Pisum sativum* L. – Shl, T, Er, very rare

Lythraceae

*167. *Lythrum salicaria* L. – Per, H, Ap, rare

Onagraceae

168. *Epilobium parviflorum* Schreb. – Per, H, Ap, rather frequent
169. *E. ciliatum* Raf. – Per, H, He, very rare
*170. *Chamaenerion angustifolium* (L.) Scop. – Per, H, Ap, rare
171. *Oenothera biennis* L. s. str. – Shl, H, Ap, frequent

Malvaceae

*172. *Malva sylvestris* L. – Shl, H, Ar, rare
173. *M. neglecta* Wallr. – Shl, H, Ar, frequent

Tiliaceae

174. *Tilia cordata* Mill. – Per, M, Ap, very rare

Oxalidaceae

*175. *Oxalis fontana* Bunge – Per, G, Ep, rather frequent

Geraniaceae

176. *Geranium pratense* L. – Per, H, Ap, rare
177. *G. pusillum* Burm. F. ex L. – Shl, T, Ar, frequent
178. *G. robertianum* L. – Shl, H, Ap, rare
179. *Erodium cicutarium* (L.) L'Hér. – Shl, T, Ap, common

Anacardiaceae

*180. *Rhus typhina* L. – Per, M, Er, very rare

Aceraceae

181. *Acer pseudoplatanus* L. – Per, M, Ap, very rare
182. *A. platanoides* L. – Per, M, Ap, rather frequent
*183. *A. negundo* L. – Per, M, He, rather frequent

Hippocastanaceae

184. *Aesculus hippocastanum* L. – Per, M, Er, rare

Balsaminaceae

185. *Impatiens parviflora* DC. – Shl, T, Ho, rare

Vitaceae

*186. *Vitis vinifera* L. – Per, N, Er, very rare
*187. *Parthenocissus quinquefolia* (L.) Planch. in A. & C. DC. – Per, N, Er, rare

Cornaceae

188. *Cornus alba* L. – Per, N, Er, very rare

Apiaceae

*189. *Sium latifolium* L. – Per, H, Ap, very rare
*190. *Carum carvi* L. – Shl, H, Ap, rather frequent
191. *Aegopodium podagraria* L. – Per, H, Ap, rather frequent
192. *Pimpinella saxifraga* L. – Per, H, Ap, frequent

*193. *Aethusa cynapium* L. – Shl, T, Ar, rare
*194. *Heracleum sibiricum* L. – Per, H, Ap, frequent
195. *H. sphondylium* L. – Per, H, Ap, rather frequent
*196. *Peucedanum oreoselinum* (L.) Moench – Per, H, Ap, rare
197. *Pastinaca sativa* L. – Shl, H, Ap, rather frequent
198. *Anethum graveolens* L. – Shl, T, Er, very rare
199. *Daucus carota* L. – Shl, H, Ap, rather frequent
200. *Anthriscus sylvestris* (L.) Hoffm. – Per, H, Ap, rather frequent
*201. *Chaerophyllum bulbosum* L. – Shl, T, Ap, very rare
202. *Torilis japonica* (Houtt.) DC. – Shl, T, Ap, rather frequent
*203. *Anethum graveolens* L. – Shl, T, Er, very rare

Plumbaginaceae

204. *Armeria maritima* (Mill.) Willd. subsp. *elongata* (Hoffm.) Bonnier – Per, H, Ap, very rare

Primulaceae

*205. *Anagalis arvensis* L. – Shl, T, Ar, very rare
*206. *Lysimachia vulgaris* L. – Per, H, Ap, rare

Convolvulaceae

207. *Convolvulus arvensis* L. – Per, G, Ar, common

Boraginaceae

208. *Anchusa officinalis* L. – Shl, H, Ap, rare
209. *Symphytum officinale* L. – Per, H, Ap, very rare
210. *Echium vulgare* L. – Shl, H, Ap, rare
*211. *Lithospermum arvense* L. – Shl, T, Ar, rare
*212. *Myosotis stricta* Link ex Roem. & Schult. – Shl, T, Ap, frequent
*213. *M. arvensis* (L.) Hill – Shl, T, Ar, rather frequent

Solanacea

*214. *Solanum nigrum* L. Emend. Mill. – Shl, T, Ar, rare
*215. *S. tuberosum* L. – Per, G, Er, very rare

Scrophulariaceae

*216. *Verbascum thapsus* L. – Shl, H, Ap, rare
*217. *V. densiflorum* Bertol. – Shl, H, Ap, rare
218. *V. nigrum* L. – Shl, H, Ap, frequent
219. *Linaria vulgaris* Mill. – Per, G, Ap, frequent
220. *Veronica chamaedrys* L. – Per, C, Ap, frequent
*221. *V. serpyllifolia* L. – Per, H, Ap, rather frequent
*222. *V. arvensis* L. – Shl, T, Ar, rather frequent

223. *V. dillenii* Crantz – Shl, T, Ap, very rare
224. *V. persica* Poir. – Shl, T, Ep, rather frequent
*225. *Euphrasia rostkoviana* Hayne – Shl, T, Ap, rare

Lamiaceae

226. *Glechoma hederacea* L. – Per, H, Ap, frequent
*227. *Prunella vulgaris* L. – Per, H, Ap, rare
*228. *Galeopsis angustifolia* (Ehrh.) Hoffm. – Shl, T, Ar, very rare
*229. *G. tetrahit* L. – Shl, T, Ap, rather frequent
*230. *G. bifida* Boenn. – Shl, T, Ap, frequent
231. *G. pubescens* Besser – Shl, T, Ap, rare
*232. *Lamium album* L. – Per, H, Ar, very rare
*233. *L. maculatum* L. – Per, H, Ar, very rare
234. *L. purpureum* L. – Shl, H, Ar, frequent
235. *L. amplexicaule* L. – Shl, H, Ar, rather frequent
*236. *Stachys palustris* L. – Per, G, Ap, rare
237. *Leonurus cardiaca* L. – Per, H, Ar, rare
238. *Ballota nigra* L. – Per, H, Ar, rather frequent
*239. *Acinos arvensis* (Lam.) Dandy – Shl, T, Ap, very rare
*240. *Thymus pulegioides* L. – Per, C, Ap, rare
*241. *T. serpyllum* L. Emend. Fr. – Per, C, Ap, rather frequent
*242. *Mentha longifolia* (L.) L. – Per, H, Ap, very rare
*243. *Mentha arvensis* L. – Per, G, Ap, frequent

Plantaginaceae

244. *Plantago major* L. – Per, H, Ap, frequent
245. *P. media* L. – Per, H, Ap, rare
246. *P. lanceolata* L. – Per, H, Ap, frequent
*247. *P. arenaria* Waldst. & Kit. – Shl, T, Ap, very rare

Oleaceae

248. *Fraxinus excelsior* L. – Per, M, Ap, very rare
*249. *Syringa vulgaris* L. – Per, N, Er, very rare

Rubiaceae

*250. *Galium verum* L. s. str. – Per, H, Ap, rather frequent
251. *G. mollugo* L. – Per, H, Ap, frequent
252. *G. aparine* L. – Shl, T, Ap, rather frequent

Caprifoliaceae

253. *Sambucus nigra* L. – Per, N, Ap, rare
*254. *Viburnum opulus* L. – Per, N, Ap, very rare
255. *Symphoricarpos albus* (L.) S. F. Blake – Per, N, Er, very rare

Dipsacaceae

256. *Knautia arvensis* (L.) J. M. Coult. – Per, H, Ap, rather frequent

Cucurbitaceae

257. *Bryonia alba* L. – Per, H, Ep, very rare
*258. *B. dioica* Jacq. – Per, H, Ep, very rare
259. *Sicyos angulata* L. – Shl, T, He, very rare

Campanulaceae

*260. *Jasione montana* L. – Shl, H, Ap, rare
261. *Campanula rapunculoides* L. – Per, G, Ap, very rare

Asteraceae

262. *Solidago canadensis* L. – Per, H, He, frequent
*263. *S. gigantea* Aiton – Per, H, He, rather frequent
264. *Bellis perennis* L. – Per, H, Ap, rare
265. *Aster lanceolatus* Willd. – Per, H, He, very rare
266. *Conyza canadensis* (L.) Cronquist – Shl, T, Ep, common
267. *Erigeron acris* L. – Shl, H, Ap, rare
268. *E. annuus* (L.) Pers. – Per, H, He, rare
*269. *Gnaphalium uliginosum* L. – Shl, T, Ap, rare
270. *Helianthus annuus* L. – Shl, T, Er, very rare
271. *H. tuberosus* L. – Per, G, He, very rare
272. *Rudbeckia hirta* L. – Per, H, Er, very rare
*273. *Bidens tripartita* L. – Shl, T, Ap, rare
274. *Galinsoga parviflora* Cav. – Shl, T, Ep, frequent
275. *G. ciliata* (Raf.) S. F. Blake – Shl, T, Ep, rare
276. *Anthemis arvensis* L. – Shl, T, Ar, frequent
277. *Achillea millefolium* L. – Per, H, Ap, common
278. *Chamomilla suaveolens* (Pursh) Rydb. – Shl, T, Ep, frequent
279. *Matricaria maritima* L. subsp. *inodora* (L.) Dostál – Shl, T, Ar, rather frequent
280. *Laucanthemum vulgare* Lam. s. str. – Per, H, Ap, rather frequent
281. *Tanacetum vulgare* L. – Per, H, Ap, frequent
282. *Artemisia absinthium* L. – Per, Ch, Ap, rather frequent
283. *A. vulgaris* L. – Per, H, Ap, rather frequent
*284. *A. scoparia* Waldst. & Kit. – Shl, T, Ap, rare
285. *A. campestris* L. – Per, Ch, Ap, rather frequent
286. *Tussilago farfara* L. – Per, G, Ap, rare
287. *Senecio vulgaris* L. – Shl, T, Ar, common
288. *S. vernalis* Waldst. & Kit. – Shl, T, Ep, rather frequent
289. *S. jacobaea* L. – Per, H, Ap, frequent

290. *Arctium tomentosum* Mill. – Shl, H, Ap, frequent
291. *A. lappa* L. – Shl, H, Ap, frequent
*292. *A. minus* (Hill) Bernh. – Shl, H, Ap, rather frequent
*293. *Carduus nutans* L. – Shl, H, Ap, very rare
*294. *C. crispus* L. – Shl, H, Ap, very rare
295. *C. acanthoides* L. – Shl, H, Ar, very rare
296. *Cirsium vulgare* (Savi) Ten. – Shl, H, Ap, rare
297. *C. arvense* (L.) Scop. – Per, G, Ap, common
298. *Onopordum acanthium* L. – Shl, H, Ar, very rare
299. *Centaurea scabiosa* L. – Per, H, Ap, rare
300. *C. stoebe* L. – Shl, H, Ap, frequent
301. *C. cyanus* L. – Shl, T, Ar, very rare
302. *C. jacea* L. – Per, H, Ap, rather frequent
303. *Cichorium intybus* L. – Per, H, Ar, rather frequent
*304. *Hypochoeris radicata* L. – Per, H, Ap, rare
*305. *H. glabra* L. – Shl, T, Ap, rather frequent
306. *Tragopogon pratensis* L. s. str. – Shl, H, Ap, frequent
*307. *T. orientalis* L. – Shl, H, Ap, rare
308. *T. dubius* Scop. – Shl, H, Ap, rare
309. *Leontodon autumnalis* L. – Per, H, Ap, frequent
*310. *L. hispidus* L. – Per H, Ap, rare
311. *Taraxacum officinale* F. H. Wigg. – Per, H, Ap, common
312. *Sonchus oleraceus* L. – Shl, T, Ar, rather frequent
313. *S. asper* (L.) Hill – Shl, T, Ar, rather frequent
314. *S. arvensis* L. – Per, G, Ap, common
315. *Lactuca serriola* L. – Shl, H, Ar, rather frequent
*316. *Crepis biennis* L. – Shl, H, Ap, rare
317. *Hieracium pilosella* L. – Per, H, Ap, frequent

Liliaceae

*318. *Allium vineale* L. – Per, H, Ap, frequent
319. *Ornithogalum umbellatum* L. – Per, G, Ap, very rare
*320. *Convallaria majalis* L. – Per, G, Ap, very rare
*321. *Asparagus officinalis* L. – Per, G, Ap, very rare

Iridaceae

322. *Iris pseudacorus* L. – Per, Hy, Ap, very rare

Juncaceae

*323. *Juncus bufonius* L. – Shl, T, Ap, rare
*324. *J. tenuis* Willd. – Per, H, Ep, rare
*325. *J. effusus* L. – Per, H, Ap, rare

*326. *J. conglomeratus* L. Emend. Leers – Per, H, Ap, rare
327. *Luzula campestris* (L.) DC. – Per, H, Ap, rather frequent

Cyperaceae

*328. *Scirpus sylvaticus* L. – Per, G, Ap, very rare
329. *Carex hirta* L. – Per, G, Ap, rather frequent

Poaceae

*330. *Digitaria ischaemum* (Schreb.) H. L. Mühl. – Shl, T, Ar, rather frequent
331. *Echinochloa crus-galli* (L.) P. Beauv. – Shl, T, Ar, rare
332. *Setaria pumila* (Poir.) Roem. & Schult. – Shl, T, Ar, rather frequent
333. *S. viridis* (L.) P. Beauv. – Shl, T, Ar, rather frequent
*334. *Anthoxanthum odoratum* L. – Per, H, Ap, rather frequent
*335. *A. aristatum* Boiss. – Shl, T, Er, very rare
336. *Phleum pratense* L. – Per, H, Ar, rather frequent
337. *Alopecurus pratensis L. – Per, H, Ap, rare*
*338. *Apera spica-venti* (L.) P. Beauv. – Shl, T, Ar, rare
*339. *Agrostis stolonifera* L. – Per, H, Ap, frequent
340. *A. capillaris* L. – Per, H, Ap, rare
341. *Calamagrostis epigejos* (L.) Roth – Per, G, Ap, frequent
*342. *Holcus mollis* L. – Per, H, Ap, frequent
343. *H. lanatus* L. – Per, H, Ap, rare
*344. *Deschampsia caespitosa* (L.) P. Beauv. – Per, H, Ap, very rare
*345. *Corynephorus canescens* (L.) P. Beauv. – Per, H, Ap, rare
346. *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl – Per, H, Ap, rare
347. *Phragmites australis* (Cav.) Trin. ex Steud. – Per, G, Ap, very rare
*348. *Eragrostis minor* Host – Shl, T, Ep, very rare
349. *Dactylis glomerata* L. – Per, H, Ap, rather frequent
350. *Poa annua* L. – Shl, T, Ap, common
*351. *P. compressa* L. – Per, G, Ap, very rare
*352. *P. trivialis* L. – Per, H, Ap, rather frequent
353. *P. pratensis* L. – Per, H, Ap, rather frequent
354. *Puccinellia distans* (Jacq.) Parl. – Per, H, Ap, very rare
355. *Bromus inermis* Leyss. – Per, H, Ap, rather frequent
356. *B. sterilis* L. – Shl, T, Ar, rare
357. *B. tectorum* L. – Shl, T, Ar, frequent
358. *B. hordeaceus* L. – Shl, T, Ap, frequent
359. *B. carinatus* Hook. & Arn. – Per, H, Ep, rare
360. *Festuca rubra* L. s. str. – Per, H, Ap, rare
361. *F. pratensis* Huds. – Per, H, Ap, rather frequent
362. *Lolium perenne* L. – Per, H, Ap, common
363. *Elymus repens* (L.) Gould – Per, H, Ap, common

364. *Triticum aestivum* L. – Shl, T, Er, rare
365. *Secale cereale* L. – Shl, T, Er, rare
366. *Hordeum vulgare* L. – Shl, T, Er, rare
*367. *H. murinum* L. – Shl, T, Ar, rare

Lemnaceae

*368. *Lemna minor* L. – Per, Hy, Ap, very rare

Typhaceae

*369. *Typha angustifolia* L. – Per, Hy, Ap, very rare

3.2. The general characterization of the vascular plants flora of the railway grounds of Łask

The vascular plants flora of the railway grounds of Łask is rich. At present, it comprises 369 taxa, which belong to 60 families. *Asteraceae* (56 taxa), *Poaceae* (38 taxa), *Fabaceae* (30 taxa), *Brassicaceae* (24 taxa), *Rosaceae* (23 taxa), *Lamiaceae* (18 taxa), *Caryophyllaceae* (17 taxa), *Polygonaceae* (16 taxa), *Apiaceae* (15 taxa), *Scrophulariaceae* (10 taxa) are the families that are richest in taxa. They comprise a total of 247 (66.9%) vascular plants of the investigated flora.

In years 2003–2004 recorded 151 new plants (see "List of taxa" – *).

Vascular plants of the very rare (103 taxa – 27.9%) and rare groups (100 taxa – 27.1%) were most frequently recorded. They constituted a total of 203 (55.0%) taxa. The interesting plants of these groups are, e.g. *Reynoutria sachalinensis*, *Reseda lutea*, *Aethusa cynapium*, *Leonurus cardiaca*, *Lactuca serriola*. The other groups comprised, respectively: that of rather frequent – 82 (22.0%) taxa, of frequent – 66 (17.9%) taxa, of common – 18 (4.9%) taxa.

In the vascular plants flora of Łask railway grounds perennial plants dominated (210 taxa – 56.9%).

As regards life forms plants of the groups of hemicryptophytes (154 taxa – 41.7%) and terophytes (123 taxa – 33.3%). The group of geophytes comprised 33 (8.9%), of megaphanerophytes 21 (5.7%) and of nanophanerophytes 26 (7.0%) taxa. Only 12 taxa (3.3%) belonged to the other groups: woody chamerophytes – 2 (0.5%) taxa, herbaceous chamerophytes – 7 (1.9%) taxa, hydrophytes – 3 (0.8%).

Plants of native origin (apophytes) constituted the most abundant group (240 taxa – 65.0%) among the geographic-historical groups. *Equisetum arvense*, *Polygonum aviculare*, *Chenopodium album*, *Berteroa incana*, *Erodium cicutarium*, *Taraxacum officinale*, *Lolium perenne*, *Elymus repens* belonged, among others, to the most common apophytes. Plants that belonged to the archaeophytes (65 taxa – 17.6%) were frequently and plants that belonged to the epoecophytes (24 taxa

– 6.5%) and ergaziophygophytes (27 taxa – 7.3%) groups rather frequently noted. Plants of the holoagriophytes (1 taxon – 0.3%), ephemerophytes (1 taxon – 0.3%) and hemiagriophytes (11 taxa) groups were very rarely and rarely recorded.

Chenopodium bonus-henricus, *Lamium album*, *Carduus acanthoides*, *Onopordum acanthium*, *Lactuca serriola* from the group of archaeophytes, and *Reynoutria sachalinensis*, *Salsola kali*, subsp. *ruthenica*, *Sisymbrium altissmus*, *Lepidium densiflorum*, *Eragrostis minor*, *Bromus carinatus* from the group of epoecophytes were those that should be mentioned as interesting in the group of antropophytes.

4. DISCUSION

The vascular plants flora of Łask railway grounds is reach. At present, it comprises 369 taxa, belonging to 60 families. Its richness is mostly affected by diverse habitat conditions and spatial arrangement and size areas of these habitats. Besides, by the vicinity of various communities, mainly ruderal and seminatural.

The characteristic distinguishing features of the investigated flora are attributable to very rare and rare plants (203 taxa – 55.0%). *Reseda lutea*, *Carduus acanthoides*, *Eragrostis minor*, *Puccinellia distans* belong, among others, to the interesting plants of these groups. Plant of the common group (18 taxa – 4.9%), e.g. *Equisetum arvense*, *Polygonum aviculare*, *Fallopia convolvulus*, *Chenopodium album*, *Berteroa incana*, *Erodium cicutarium*, *Achillea millefolium*, *Taraxacum officinale*, *Lolium perenne*, *Elymus repens* had the lowest share in the analysed flora.

Note also the plants of native origin (apophytes). They constituted the group that was richest in plants (240 taxa – 65.0%). *Polygonum bistorta*, *Alliaria petiolata*, *Agrimonia eupatoria*, *Medicago falcata*, *Astragalus glycyphyllos*, *Acinos arvensis*, *Campanula rapunculoides*, *Centaurea scabiosa*, *Ornithogalum umbellatum* should be mentioned among the groups of very rare and rare plants.

The investigation results presented in the present study may be used in the future as a basic for comparative analyses of railway grounds floras in Central Poland, as well as the vascular plants flora of the Łask railway grounds.

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