GROUND VEGETATION AS AN IMPORTANT FACTOR IN THE BIODIVERSITY OF FOREST ECOSYSTEMS AND ITS EVALUATION IN REGARD TO NITROGEN DEPOSITION

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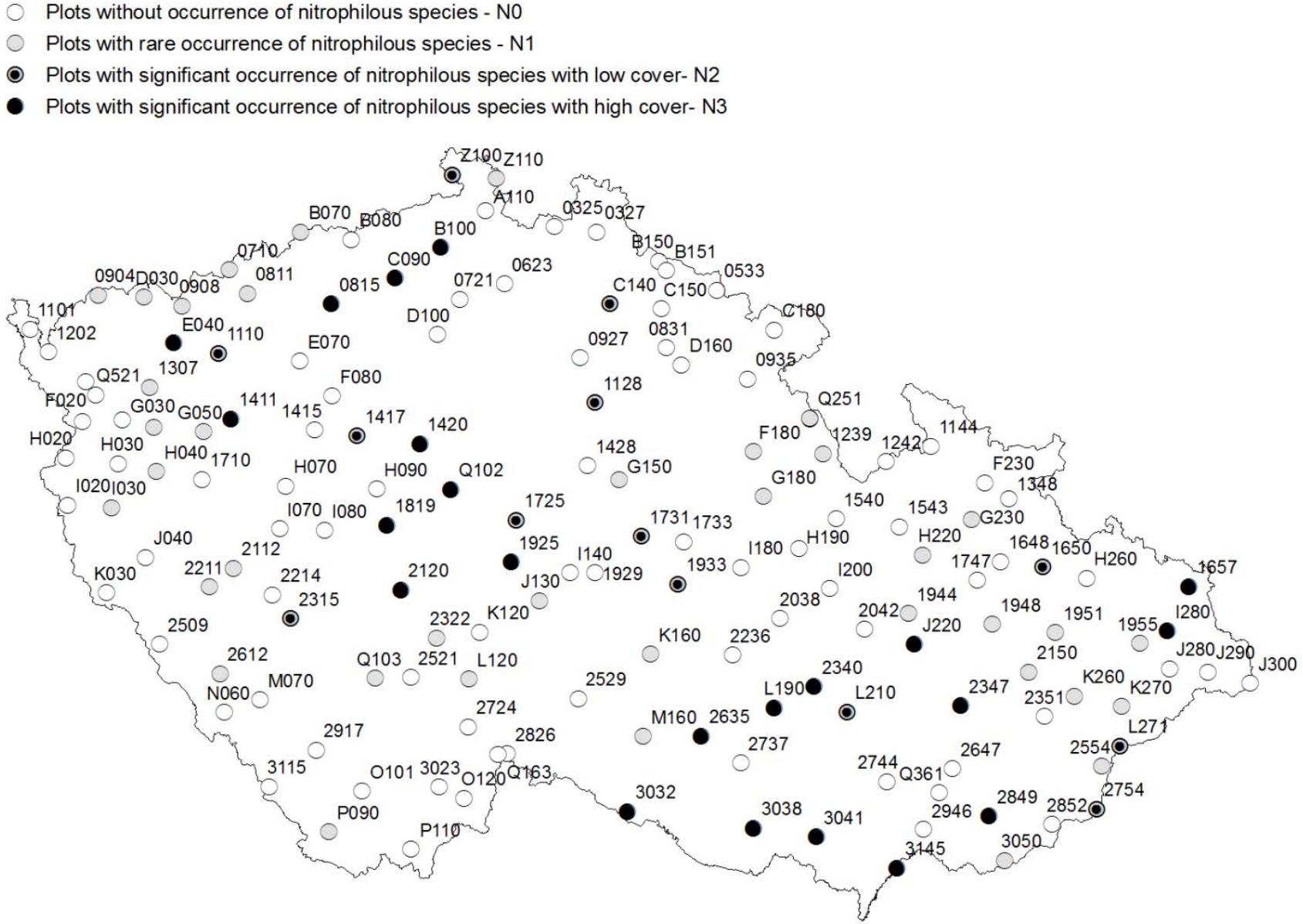
- Basic evaluation of the data from the assessment at 154 monitoring plots pertaining to the ICP Forests programme
- Changes of ground vegetation during the past 15 years in regard to the influence of nitrogen

Occurrence of nitrophilous species



Trends in occurrence of nitrophilous species

Statistical evaluation

Table 1. *P*-values of Kruskal-Wallis ANOVA and median tests for all the three horizons and for the four selected nitrophilous species

Species (number of plots with/without species)		FH		M01		M12	
		N_{tot}	C/N ratio	N_{tot}	C/N ratio	N_{tot}	C/N ratio
Geranium robertianum (24/121)	Kruskal-Wallis ANOVA	0.2050	0.0003	0.0739	0.0001	0.0066	0.0001
	median test	0.1923	0.0001	0.1683	0.0001	0.0231	0.0004
Impatiens parviflora (30/115)	Kruskal-Wallis ANOVA	0.6220	0.0058	0.5713	0.0012	0.2375	0.0006
	median test	0.9662	0.0447	0.3884	0.0447	0.2032	0.0003
Sambucus nigra (33/112)	Kruskal-Wallis ANOVA	0.3197	0.0445	0.2328	0.0005	0.2328	0.0002
	median test	0.3445	0.0329	0.1523	0.0009	0.5226	0.0002
Urtica dioica (50/95)	Kruskal-Wallis ANOVA	0.6927	0.0000	0.0110	0.0000	0.0006	0.0015
	median test	0.7724	0.0000	0.0122	0.0002	0.0004	0.0006

FH – humus layer, M01 – mineral soil layer 0–10 cm, M12 – mineral soil layer 10–20 cm, N_{tot} – total nitrogen content, C/N ratio – carbon to nitrogen ratio

Conclusions

- At nearly a half of the plots the presence of nitrophilous indicators was confirmed,
- At a number of plots their presence and coverage have increased in recent years,
- Significant differences between the plots were detected in the humus and upper mineral horizons in regard to the C/N ratio,
- Significantly elevated concentrations of nitrogen were recorded in the 10–20 cm mineral horizon at sites where there was an occurrence of elder (*Sambucus nigra*).

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