

ASPECTS CONCERNING THE SPREADING OF NORWAY MAPLE IN ROMANIA

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Abstract: Norway maple is important mixture specie in the forests of our country. Although the area occupied by this specie is not very large, it is found spectrum from plain area to the mountain. Mostly, however the specie meets in the hilly storey, sessile oak stand, European beech stand, European beech – sessile oak mixed stand, followed by the hilly storey with *Quercus* species (sessile oak, Turkey oak, Hungarian oak, mixed stands and hill mixed hardwood forest).

INTRODUCTION

Norway maple is found in plain mixed hardwood forests and hill mixed hardwood forests, rarely in the mountain region. It is a valuable species in stands with oaks and in the protection curtains. It is also important like an ornamental tree.

MATERIALS AND METHODS

In order to study the spreading of Norway maple in our country has been used database of national forest fund. Data processing is done for all Forest Administration taking into account the stands with Norway maple in their composition. The recorded areas were effective areas determined by multiplying the compartment areas, the percentage of specie participation in stand composition and crown density of the stand.

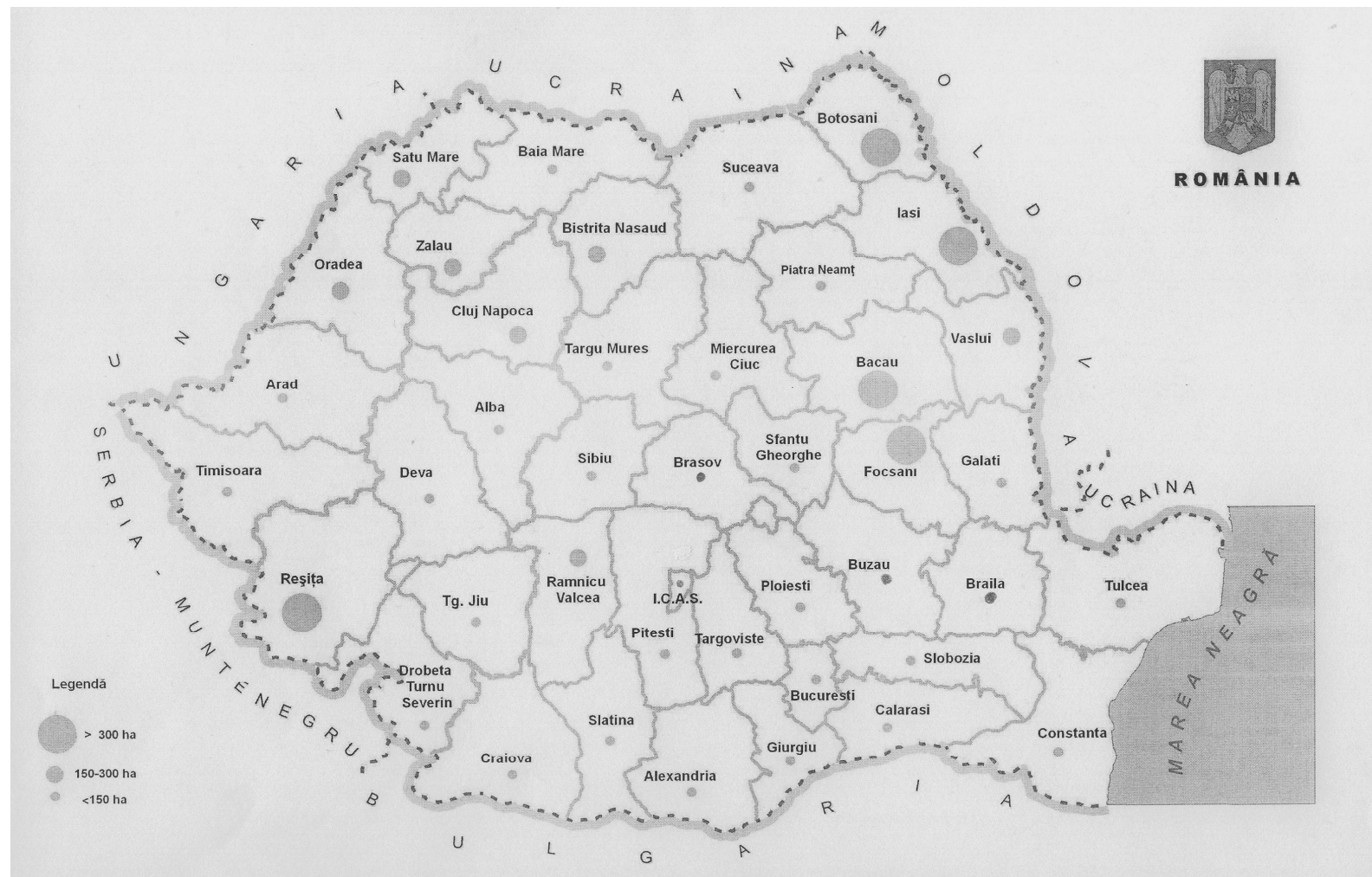
RESULTS AND DISCUSSIONS

In our country the total area with Norway maple is 5482.0 ha.

Because the quite large environmental magnitude of Norway maple, the specie is spreading in all Forest Administration (F.A.). To have a picture of Norway maple spreading in Forest Administrations there have been established following class sizes with the effective area occupied by Norway maple:

- effective areas < 150 ha;
- effective areas between 150 - 300 ha;
- effective areas > 300 ha;

As show in table 1 and figure 1 the highest area occupied by Norway maple is in Forest Administrations of Bacau, Botosani, Iasi and Focsani. These five Forest Administrations represent 36% of the total area occupied by Norway maple in Romania.



Distribution of Norway maple in terms of Forest Administration County and size classes of covered areas

Figure 1

Note the grouped spread of Norway maple (the 12 counties placed in medium and large classes represent 62% of the total area occupied by Norway maple in Romania).

Table 1

Distribution of Norway maple in terms of Forest Administration County

F.A.	Surface (ha)	F.A.	Surface (ha)	F.A.	Surface (ha)
Alba	99,9	Craiova	46,7	Reșița	450,5
Alexandria	39,1	Deva	66,0	Satu Mare	247,2
Arad	77,8	Dr. Tr. Severin	115,0	Sf. Gheorghe	5,5
Bacău	343,1	Focșani	319,9	Sibiu	58,6
Baia Mare	135,9	Galați	37,1	Slatina	40,1
Bistrița-Năsăud	172,8	Giurgiu	38,5	Slobozia	57,5
Botoșani	345,9	Iași	547,6	Suceava	114,1
Brăila	22,7	ICAS	44,7	Târgoviște	49,9
Brașov	6,5	Miercurea Ciuc	7,8	Târgu Jiu	37,1
București	62,5	Oradea	271,8	Târgu Mureș	115,0
Buzău	27,3	Piatra Neamt	112,6	Timișoara	69,0
Călărași	47,5	Pitești	141,9	Tulcea	106,2
Cluj Napoca	244,8	Ploiești	23,0	Vaslui	243,1
Constanța	87,2	Rm. Vâlcea	202,9	Zălău	199,7
Total					5482,0

Analysis the actual area occupied by Norway maple shows that on nationally level specie is found on 31 types of soils belonging an six classes of soil (table 2).

Table 2

Distribution of stands with Norway maple in their composition on soil classes

No.	Class of soil	Actual area	
		(ha)	%
1.	Cernisoluri	730,8	13
2	Luvisoluri	2365,6	43
3	Cambisoluri	1914,2	35
4	Spodisoluri	62,9	1
5	Andisoluri	23,6	1
6	Pelisoluri	385,6	7
Total		5482,0	100

In analysing the distribution of Norway maple in national forest fund, besides the distribution of soil classes, an important role it has the distribution of specie on the altitudinal pant belt (Table 3).

Table 3

Distribution of stands with Norway maple in their composition on altitudinal plant belt

Nr. crt.	Altitudinal plant belt		Surface (ha)	% participation
	Cod	Name		
1	FSa	Subalpin	-	-
2	FM ₃	Mountain of Norway spruce	67,8	1
3	FM ₂	Mountain of mixed stand	262,0	5
4	FM ₁₊ FD ₄	Mountain-premountain of European beech stands	515,7	9
5	FD ₃	Hilly stand with sessile oak stand, European beech stand, European beech- sessile oak mixed stand	2219,4	41
6	FD ₂	Hilly stand with Quercus sp. (sessile oak, Turkey oak, Hungarian oak and mixed stands) and hill mixed hardwood forest	1232,9	22
7	FD ₁	Hilly stand with common oak (and Turkey oak, Hungarian oak, sessile oak and mixed stand of them)	433,1	8
8	CF	Forest plane	256,4	5
9	Ss	Silvosteppe	494,7	9
Total			5482,0	100

Norway maple is spread mainly in the hilly altitudinal plant belt with sessile oak, European beech stand and European beech-sessile oak stand (41%), followed by the hilly altitudinal plant belt with *Quercus* sp. (sessile oak, Turkey oak, Hungarian oak, mixed stands and hill mixed hardwood forest) which occupies an area of 22% (Table 3).

Table 4

Distribution of stands with Norway maple in their composition in FD₃ altitudinal plants belt on types of forest site

Forest site	Area		Forest site	Area	
	Ha	%		Ha	%
5112	18,2	1	5212	2,6	-
5113	7,6	-	5221	31,7	2
5121	9,7	-	5222	82,3	4
5122	2,6	-	5225	1,3	-
5123	11,5	1	5231	21,2	1
5131	9,3	-	5232	83,1	4
5132	101,1	5	5233	55,6	3
5133	0,1	-	5234	2,3	-
5135	1,1	-	5241	3,9	-
5142	74,4	3	5242	494,2	22
5143	1,3	-	5243	245,9	11
5151	6,9	-	5245	0,7	-
5152	534,5	24	5253	18,9	1
5153	375,5	17	5254	16,6	1
5154	4,9	-	5332	0,4	-
Total			2219,4		100

Within the altitudinal plants belt FD₃, Norway maple appears in higher percentage in the types of forest site 5.1.5.2. Hilly of sessile oak stand and 5.2.4.2. Hilly of European beech stand.

CONCLUSIONS

Analysis the Norway maple spread in natural forest fund shows that the specie meets throughout the country.

As regards the distribution of types of soil, specie meets mainly on soil belonging to the class luvisoluri (43%) followed by the class cambisoluri (35%), other classes of soil are poorly represented.

The Norway maple on the altitudinal plants belt put into evidence the spread of the species in the hilly altitudinal plants belt with sessile oak stand, European beech stand and European beech-sessile oak stands, followed by the hilly altitudinal plants belt with *Quercus* sp. floor (sessile oak, Turkey oak, Hungarian oak, mixed stands and hill mixed hardwood forest). It is surprising the quite low presence in the hilly altitudinal belt with common oak (8%) and forestry plain but should not be lost sight of the small area occupied by forests in these altitudinal plants belt.

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