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## MAPPING OF TRANSYLVANIAN HERPETOFAUNA

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RÁCZ, ZENO FARKAS, TRAIAN BRAD**

**Abstract:** Based on a survey of 1046 localities from Transylvania distributional map for 15 species of amphibians (*Salamandra salamandra*, *Triturus vulgaris*, *T. cristatus* complex, *T. alpestris*, *T. montandoni*, *Bombina variegata*, *B. bombina*, *Pelobates fuscus*, *Bufo bufo*, *B. viridis*, *Hyla arborea*, *Rana temporaria*, *R. dalmatina*, *R. arvalis*, *R. esculenta* complex) and 13 species of reptiles (*Enys orbicularis*, *Lacerta agilis*, *L. viridis*, *L. praticola*, *L. vivipara*, *Podarcis muralis*, *Anguis fragilis*, *Natrix natrix*, *N. tessellata*, *Coronella austriaca*, *Elaphe longissima*, *Vipera ammodytes*, *V. berus*) is generated. The typical habitat and status for each species is indicated.

### INTRODUCTION

The most important papers referring to Romanian herpetofauna are the two volumes of Romanian Fauna; published in 1960 (Amphibia – by Fuhn) and 1961 (Reptilia – by Fuhn and Vancea). They group the information known at that time, gathered by foreign and romanian herpetologists starting with the middle of the 19-th century (Bielz, 1856, Kiritzescu, 1901, Mertens, 1923, Călinescu, 1931, Fejervary-Langh, 1943, Fuhn, 1940, 1952, 1953, 1955, Vancea, 1958, Vancea și Fuhn, 1959 etc.). These data are far from reflecting the actual distribution of herpetofauna, representing only about 5–10 % of the existing status.

Subsequent research, between 1961–1996, were discontinuous: about 20 papers concerning small areas herpetofauna (e.g. Micluța, 1970 – Fau-



## RESULTS

The herpetofaunistical mapping in Transylvania have identified 15 amphibian and 13 reptile species.

Table 2 presents the number of localities in each district for each herps species and Annex 1 presents the 1046 localities with the species found in each locality.

CLS. AMPHIBIA

ORD. URODELA

Fam. Salamandridae

1. *Salamandra salamandra* L.1758 (fire salamander, salamandră)

Common in beech and oak forests and very rare in coniferous ones; occurs between 400 and 1400 m; it was found in 392 localities. Its areal is continuous in hilly and mountain region. The species is missing in almost all plain regions.



Fig. 1. New localities for *Salamandra salamandra* in Transylvania

2. *Triturus vulgaris* (Linnaeus) 1785 (Smooth Newt)

A species whose distribution is altitudinally limited, reaching approximately 1000 m. Usually it occurs together with *T. cristatus* in swamps, ditches, puddles, in plains and hills, but in a considerably reduced number in the mountain area. One exception – in Apuseni Mountains, in Platoul Padiș, it occurs at about 1400 m altitude in a large puddle, together with *T. alpestris*. In the studied area it was found in 449 localities. It must be

specified that it has been observed three living together newt species – *T. vulgaris*, *T. cristatus* and *T. alpestris*, – at about 8-900 altitude in the Șureanu, Poiana Ruscă and Metaliferous Mountains (all belonging to Apuseni Mountains).

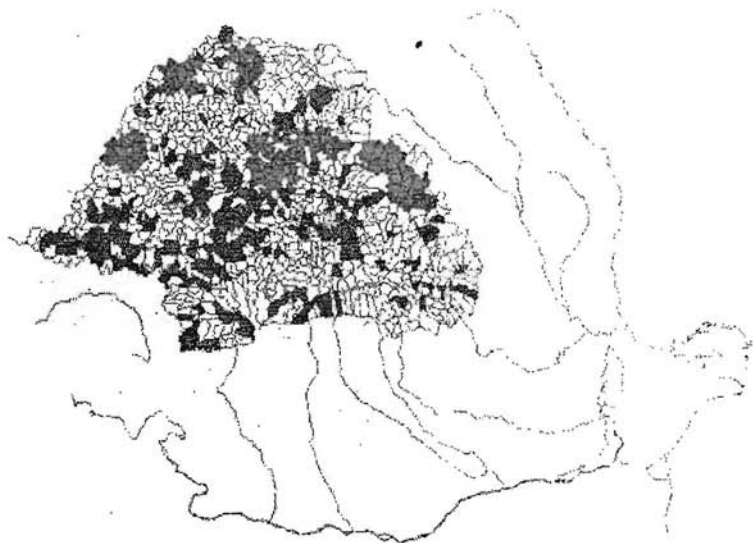


Fig.2 New localities for *Triturus vulgaris* in Transylvania

3. *Triturus cristatus complex* Laurentus, 1768 (warty newt, triton cu creastă)

Common species, preferring large swamps in comparison to other newt. Found in 449 localities in plain and hill region, up to 900 m altitude. No differences were made between this species and *T. dobrogicus*. This species was recorded before in the Western Plain (Covaciu-Marcov, personal communication)



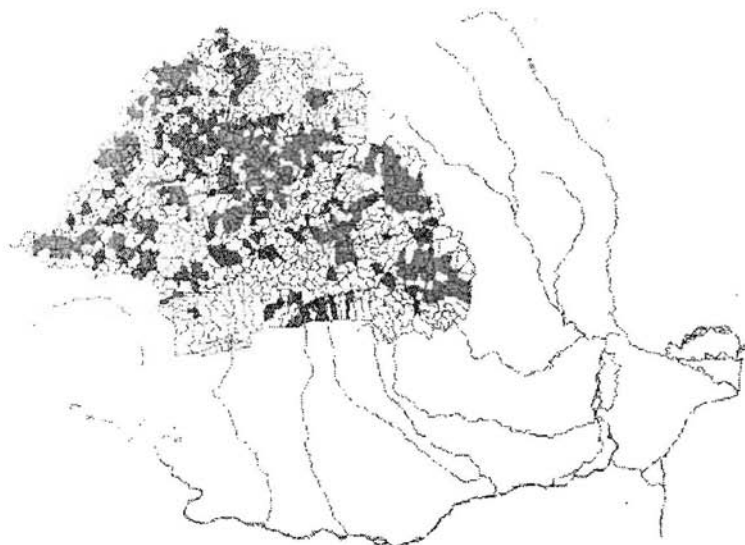


Fig. 3 New localities for *Triturus cristatus complex* in Transylvania

4. *Triturus alpestris* (Laurentus) 1768 (alpine newt, triton de munte)

A common species in puddles, swamps and ditches at the paths' verges, or on mountainsides, between 1800 and 700 m. Usually in beech or spruce-fir forested areas, and rare in dwarf pine forests, or higher. In Highiş-Drocea Mountains (In Arad district), it reaches the lowest altitude: 450 m.

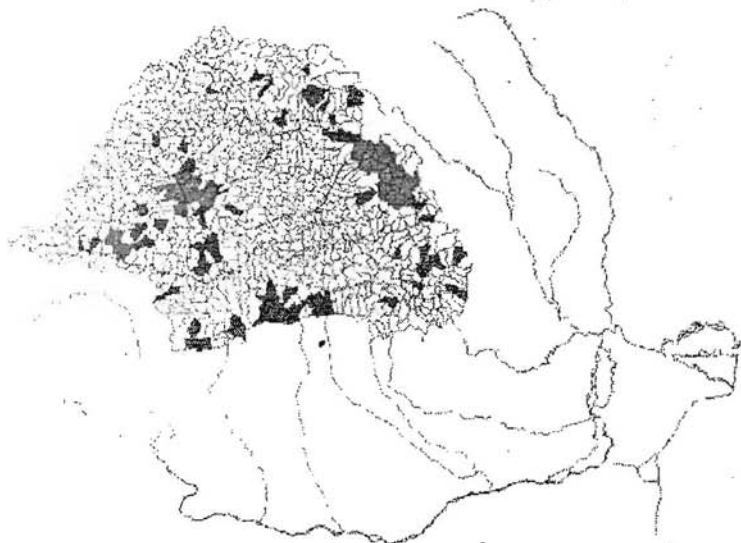


Fig. 4 New localities for *Triturus alpestris* in Transylvania

5. *Triturus montandoni* (Boulenger) 1880 (Montandon's newt, triton carpatic)

An endemic species for the Carpathian Basin, it is not rare in the Eastern Carpathians mountain areas and rare in hill ones. Of all amphibian species, *Tr. montandoni* seems to be the rarest, being found in only 16 localities. Two new localities were found in the western part of Bistrița-Năsăud district, in a hilly region, expanding the areal. These populations seem to be hybrid with *T. vulgaris*.

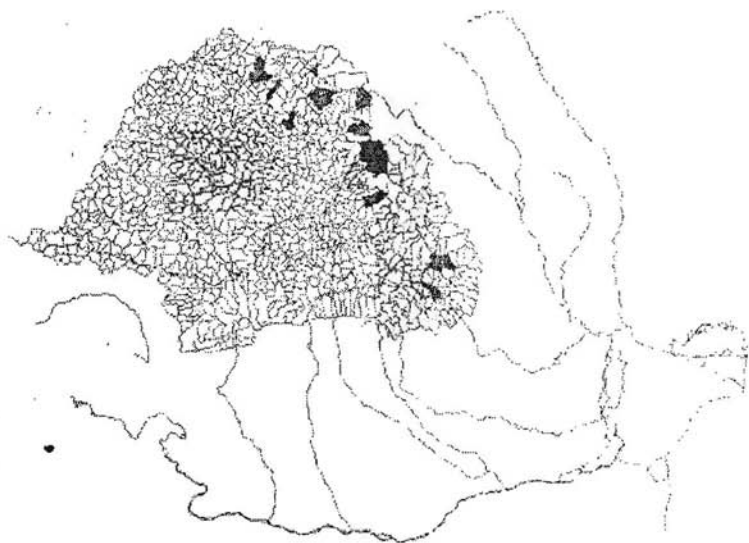


Fig. 5 New localities for *Triturus montandoni* in Transylvania

#### ORD. ANURA

Fam. Discoglossidae

6. *Bombina variegata* (Linnaeus) 1758 (yellow-bellied toad, izvo-raș-cu-burta-galbenă)

It is a species altitudinally occurring between 300 and 1600-1700 m. Not pretentious to water quality, may be found in small, temporary water bodies (swamps, ditches, puddles), being the most common amphibian species together with *Rana ridibunda*. The lowland populations are hybrids with *B. bombina*.



Fig. 6 New localities for *Bombina variegata* in Transylvania

7. *Bombina bombina* (Linnaeus) 1761 (red bellied toad, izvoraş-cu-burta-roşie)

A lowland species, sensitive to water's quality. Rarely seen in the Transylvanian Plain (Cluj, Bistriţa-Năşăud and Mureş districts) and much more often in The Western Plain (Sătu-Mare, Bihor and Arad districts).



Fig. 7. New localities for *Bombina bombina* in Transylvania

## Fam. Pelobatidae

8. *Pelobates fuscus* (Laurentus) 1768 (common spadefoot, broască săpătoare brună)

Secretive nocturnal species, discontinuous found in lowland and hills up to 700 m. Rare or difficult to be observed, needs further investigations to complete the distribution map.

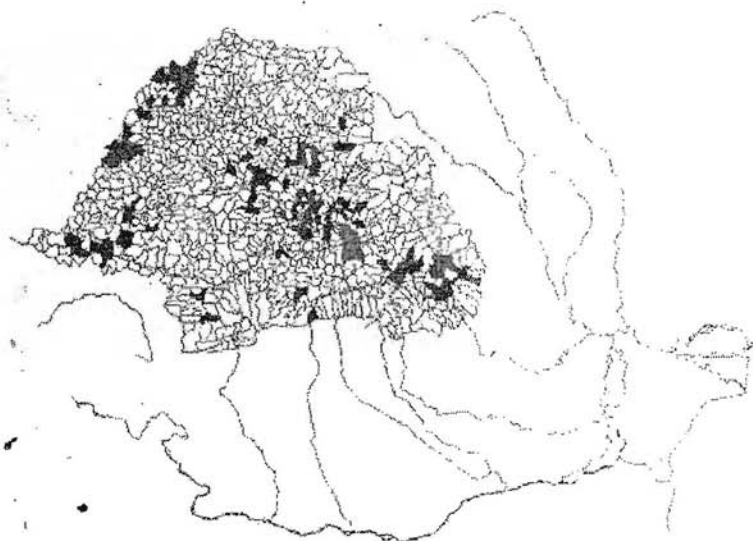


Fig. 8. New localities for *Pelobates fuscus* in Transylvania

## Fam. Bufonidae

9. *Bufo bufo* (Linnaeus) 1758 (common toad, broasca râioasă brună)

A common species in Transylvania, especially in mountainous and hilly regions. It occurs up to 1400 m. The most important populations live in beech and hornbeam forests.

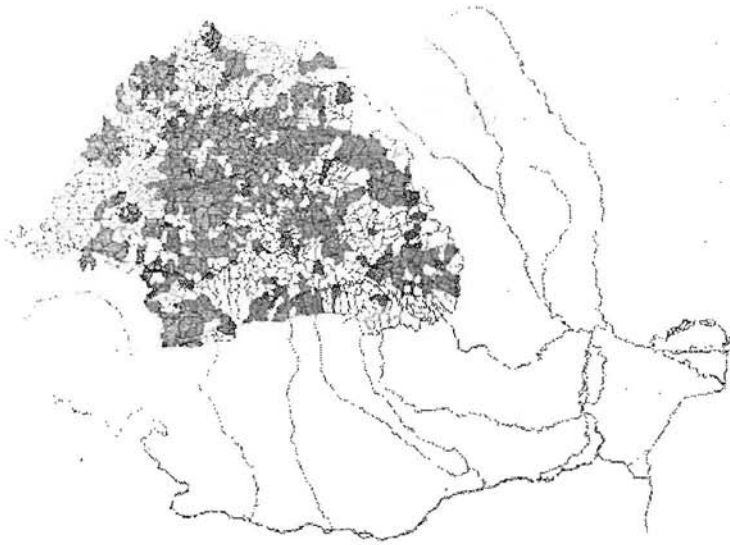


Fig. 9. New localities for *Bufo bufo* in Transylvania

- 10. *Bufo viridis*** Laurentus 1768 (green toad, broasca râioasă verde)  
Common in lowland and hilly regions and rare in mountain zones.  
Occurs up to 900 m, being thermophilous. Very resistant to dryness, and to salty water.

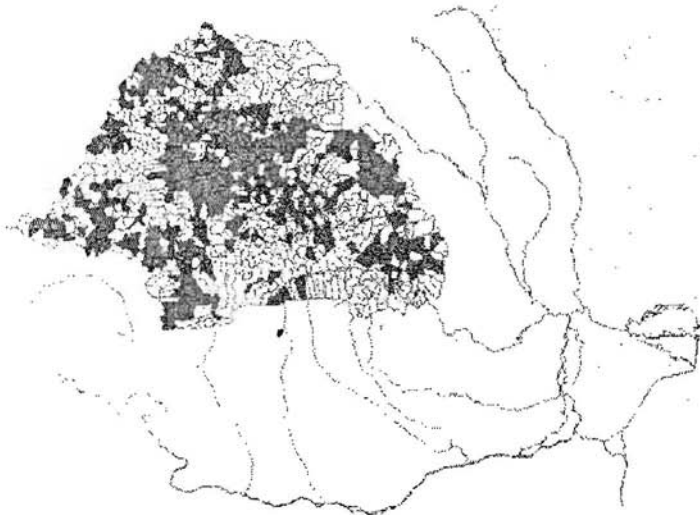


Fig. 10. New localities for *Bufo viridis* in Transylvania

## Fam. Hylidae

**11. *Hyla arborea*** (Linnaeus) 1758 (common tree frog, brotac)

Arboreal species, found in lowlands and hill regions, up to 800 m; not very large populations, comparatively to south of the country.

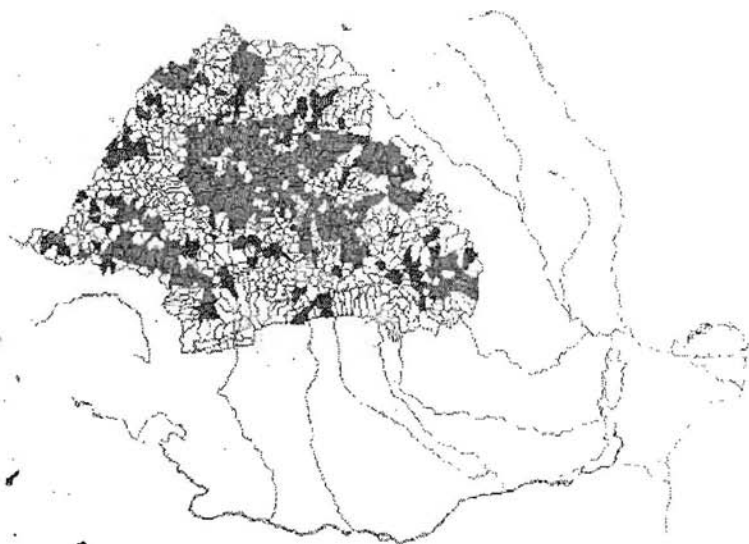


Fig. 11. New localities for *Hyla arborea* in Transylvania

## Fam. Ranidae

**12. *Rana temporaria*** Linnaeus 1758 (common frog, broasca roşie de munte)

A common species in mountain forests, less common in hills and very rare in lowlands. Large populations in coniferous and beech woods, where needs swamps, ditches or ponds to reproduce. The most resistant species to low temperatures, it can live by glacial ponds at 2000–2200 m altitude, in Retezat, Parâng or Făgăraş Mountains.

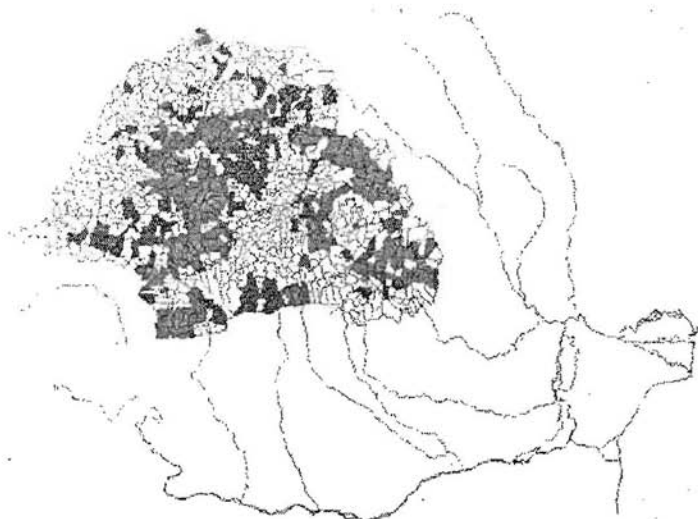


Fig. 12. New localities for *Rana temporaria* in Transylvania

13. *Rana dalmatina* Bonaparte 1839 (agile frog, broașca roșie de pădure)

One of the most common frog, especially in lowland, hill and mountain forests and pastures, up to 1000 m. Occurs in the same habitats as *R. temporaria*, but is more thermophilous.

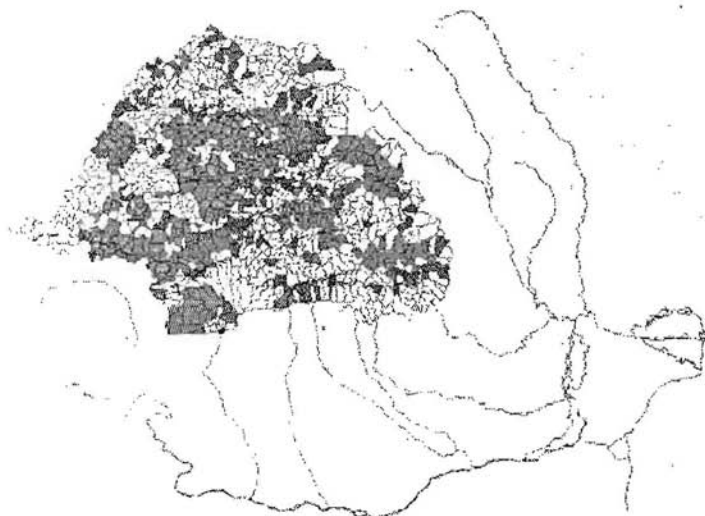


Fig. 13. New localities for *Rana dalmatina* in Transylvania

14. *Rana esculenta* complex: *Rana ridibunda* Pallas 1771 and *R. lessonae* Camerano 1878 (marsh frogs, broasca de lac)

The most common species, wide-spread in almost all water bodies up to 800 m. No special investigation was performed concerning *R. lessonae* except two localities (Cluj and Urziceni – Satu-Mare district) where this species was found.

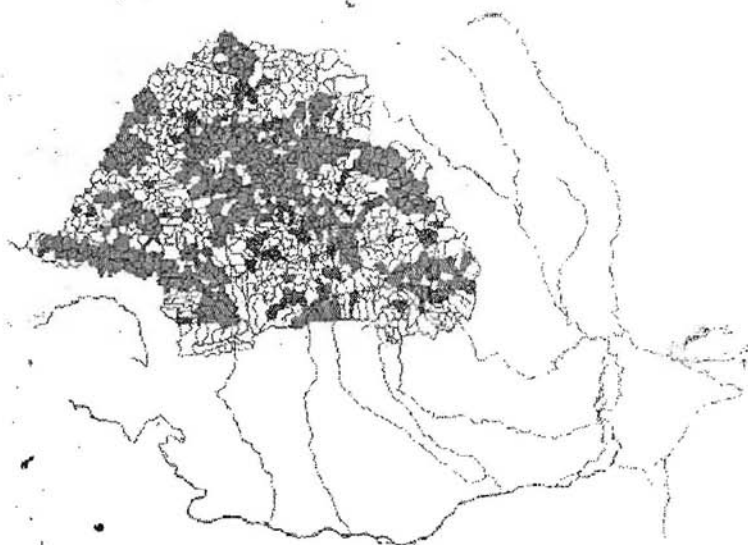


Fig. 14. New localities for *Rana esculenta* complex in Transylvania

15. *Rana arvalis* Nilsson, 1842 (moor frog, broască de mlaștină)

Rare species occurring in Transylvania in lowland habitats, by marshes and swamps. Most of the new localities were found in Satu-Mare, Bihor and Covasna districts.



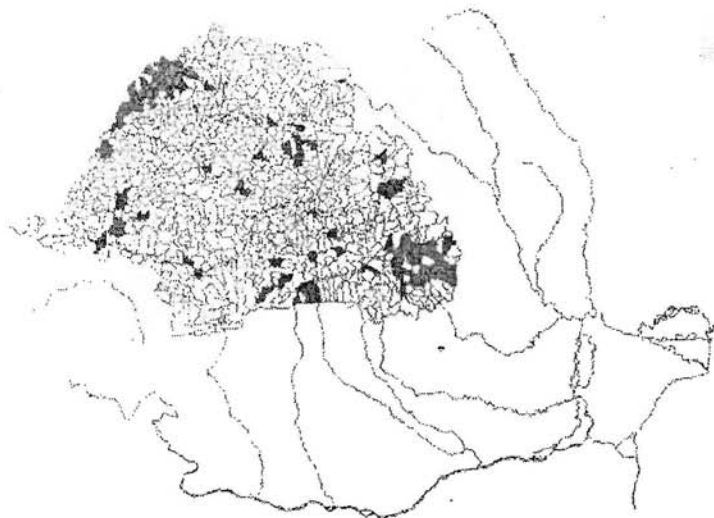


Fig. 15. New localities for *Rana arvalis* in Transylvania

CLS. REPTILIA  
ORD. TESTUDINA

Fam. Emididae

16. *Emys orbicularis* (Linnaeus) 1758 (pond turtle, țestoasă de apă)  
Rare species, known before in only 14 localities. Especially recorded in lowlands (in large ponds used for fish breeding) and in few small river valleys used as a refuges. These populations are very small and vulnerable.

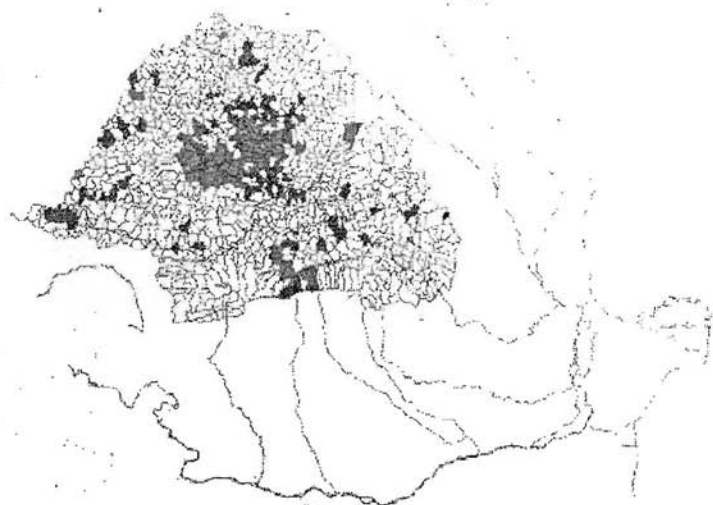


Fig. 16. New localities for *Emys orbicularis* in Transylvania

ORD. SAURIA

Fam. Lacertidae

17. *Lacerta agilis* Linnaeus 1758 (sand lizard, șopârlă de câmp)

The most common lizard species occurring in two thirds of the checked localities. Large populations exist in lowlands but the species goes up to 1400 m on some river valleys. It is depending on a certain degree of humidity.

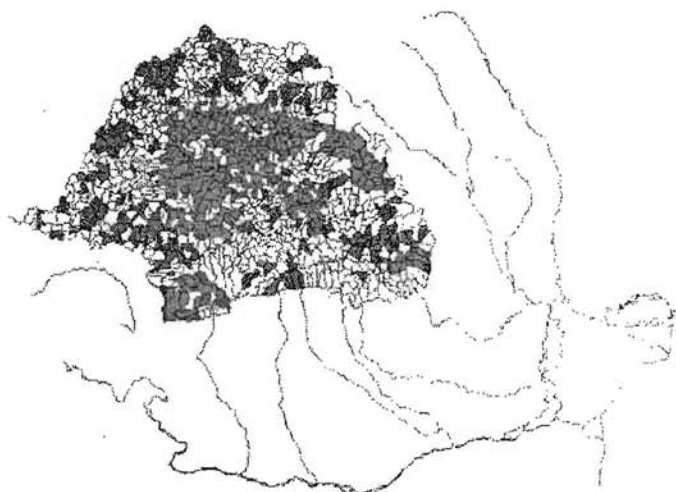


Fig. 17. New localities for *Lacerta agilis* in Transylvania

18. *Lacerta viridis* (Laurentus) 1768 (green lizard, guşter)

Thermophilic species, occurring up to 700–800 m altitude. Common in hill region and less common in lowlands. Prefers the slope sun exposed and rocky habitats.

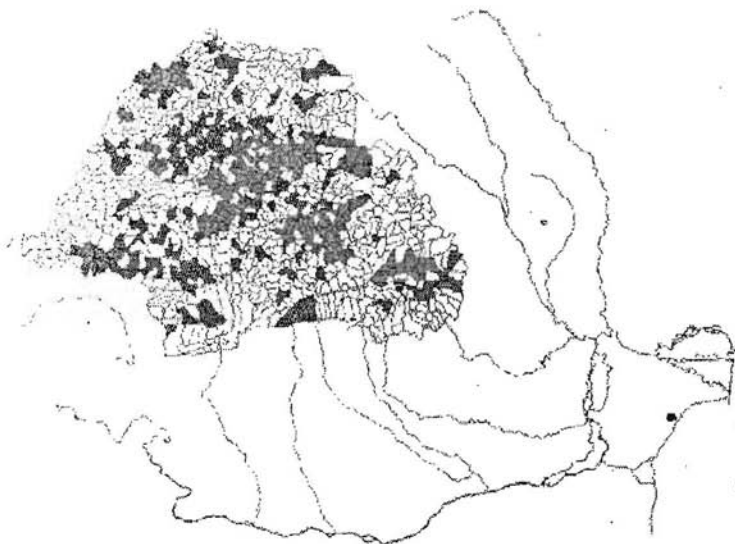


Fig. 18. New localities for *Lacerta viridis* in Transylvania

19. *Lacerta praticola* Eversmann 1834 (meadow lizard, şopârlă de păşune)

In Transylvania, this southern species was found by us in only one locality: Deva in Hunedoara district (Ghira, 1994). Deva is situated in the N-E part of Poiana Ruscă Mountains. In 1943, Fejervary Langh records the species in the S-W part of these mountains in Nădrag, Timiş district. The meadow lizard is a very secretive species and further investigations have to be done.

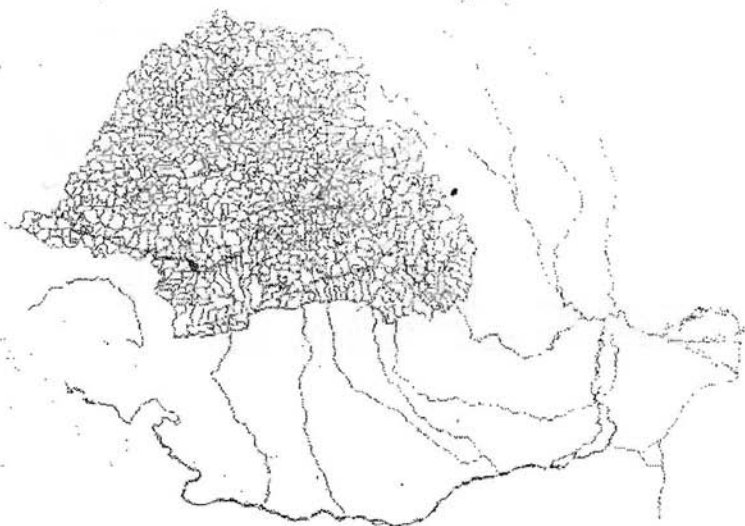


Fig.19. New localities for *Lacerta praticola* in Transylvania

**20. *Lacerta vivipara*** Jacquin 1787 (viviparous lizard, șopârlă de munte)

Known before as a mountainous species in our country, it was found in Western Plain in three localities: Marghita, in Bihor district, and Căuaș and Ady-Endre in Satu-Marc district. These populations seem to be connected to the eastern Hungarian lowland populations.

Other new localities were found in the mountainous zone, where it prefers forest edges, pastures, glades, and sunny slopes. Occurs up to 2000 m; in Grădiștea de Munte, Hunedoara district, the species goes down to 600 m altitude in the river valley, in mixed populations with *Podarcis muralis*.

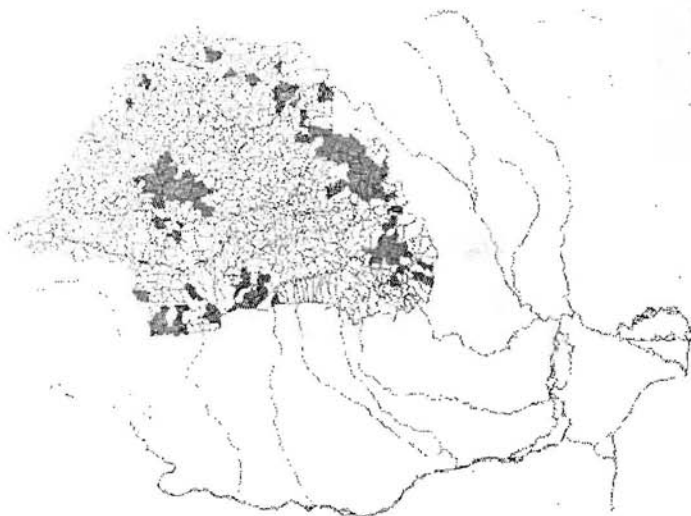


Fig. 20. New localities for *Lacerta vivipara* in Transylvania

21. *Podarcis muralis* Bielz 1856 (common wall lizard, șopârlă de ziduri)

Much more dependent to rocky habitats than *L. viridis*, the common wall lizard occurs in compact populations only in rock piles, scree, debris or other rocky habitats. Not very common because of the scarcity of these habitats. Altitudinally spread up to 1200 m, only in some limestone steep valleys, but usually up to 8-900 m.

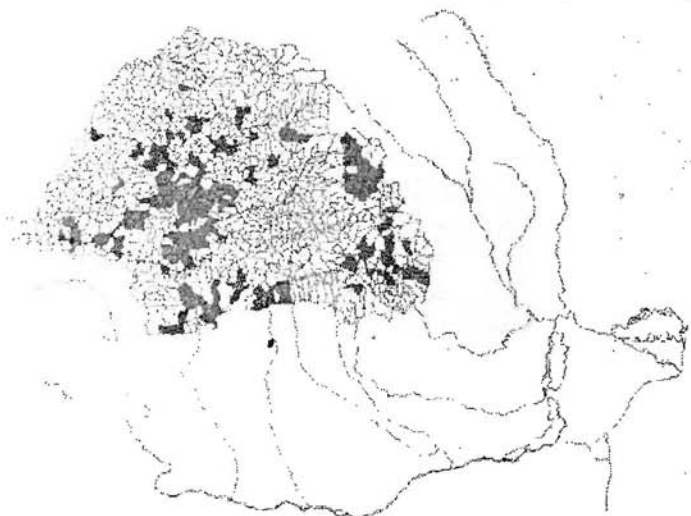


Fig. 21. New localities for *Podarcis muralis* in Transylvania

## Fam. Anguidae

22. *Anguis fragilis* (Nordmann) 1840 (slow worm, șarpe de sticlă, năpârcă)

An ovoviviparous common species spread between 300 and 1900 m altitude. The largest populations occur in wet lawns in hilly and low mountain zones.

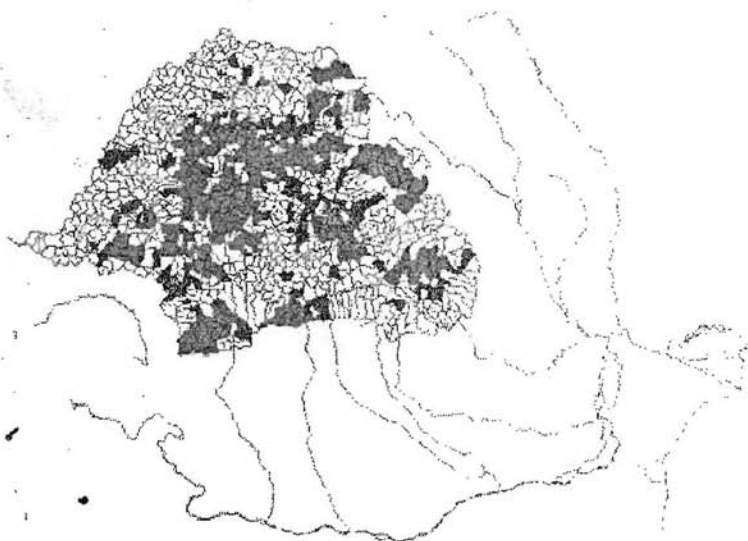


Fig. 22. New localities for *Anguis fragilis* in Transylvania

ORD: SERPENTES

Fam. Colubridae

23. *Natrix natrix* (Linnaeus) 1758 (grass snake, șarpe de casă)

The most common snake species, goes up to 900 m altitude; prefers the vicinity of river valleys or other water bodies, but occurs too in forest edges, lawns or cultivated areas.

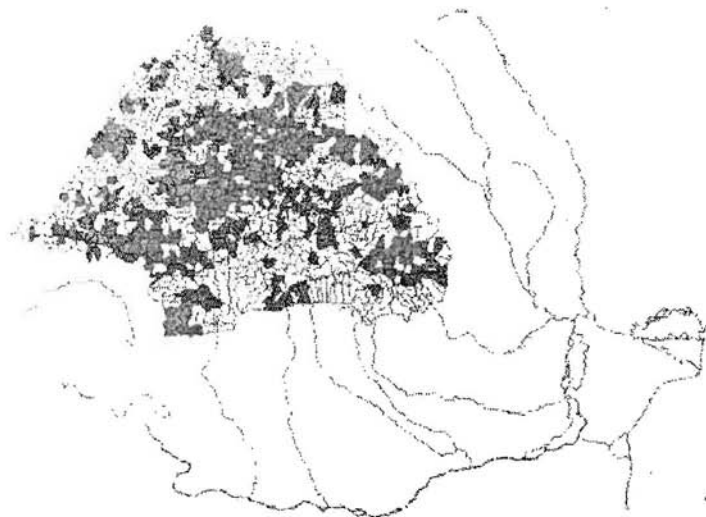


Fig. 23. New localities for *Natrrix natrrix* in Transylvania

24. *Natrrix tessellata* (Laurentus) 1768 (dice snake, șarpe de apă)  
Semiaquatic species occurring by running or stagnant water, up to  
900 m altitude.

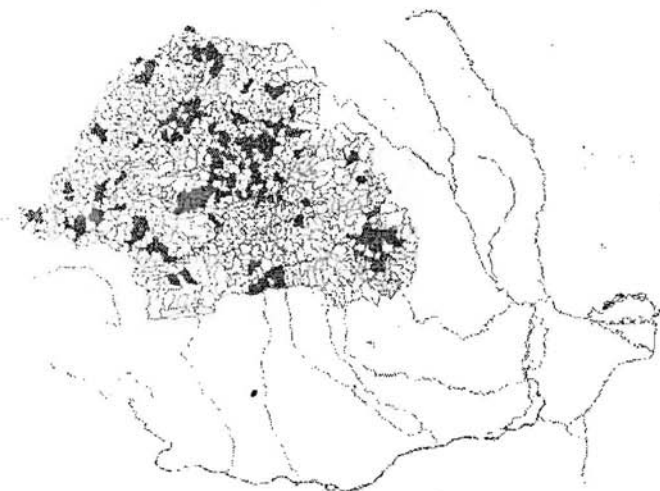


Fig. 24. New localities for *Natrrix tessellata* in Transylvania

25. *Coronella austriaca* Laurentus 1768 (smooth snake, șarpe de alun)

Prefers rocky habitats, but occurs equally in dry steep slopes sun exposed covered partially by vegetation and populated by lizards. More often in hilly regions than in lowland or mountain ones. In Transylvania goes up to 8–900 m.

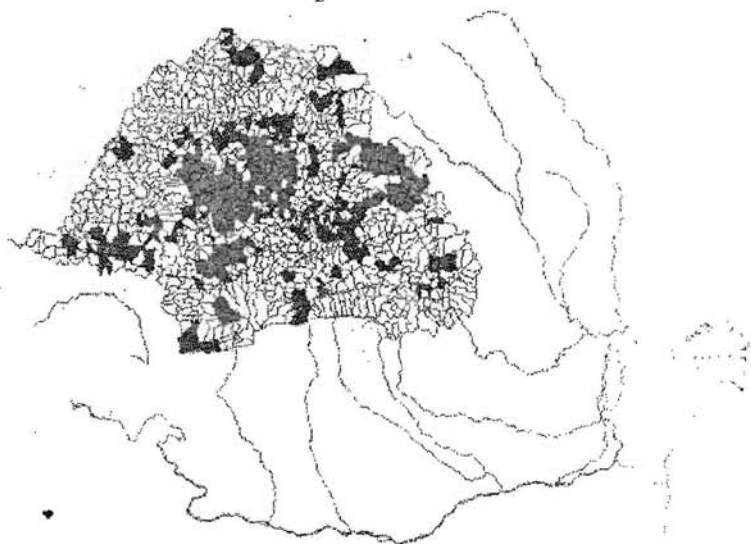


Fig. 25. New localities for *Coronella austriaca* in Transylvania

26. *Elaphe longissima* (Lurentus) 1768 (aesculapian snake, șarpele lui Esculaḃ; șarpe de pădure)

Arboreal species restricted to woodland habitats. Rare in lowlands but not very rare in hilly and mountainous regions up to 1000–1100 m.



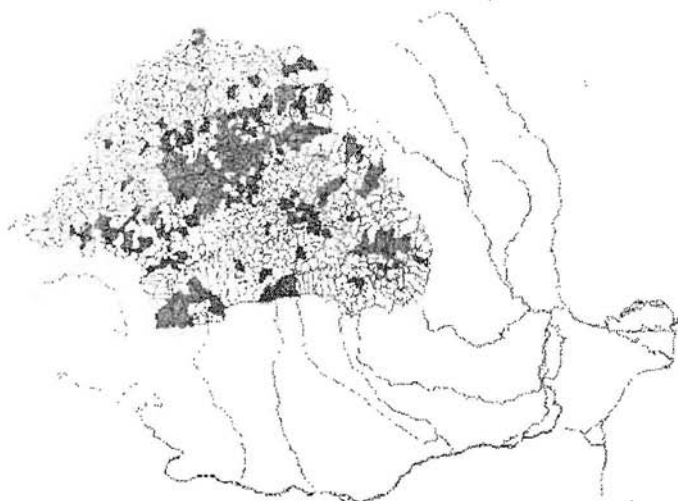


Fig. 26. New localities for *Elaphe longissima* in Transylvania

Fam. Viperidae

27. *Vipera berus* (Linnaeus) 1758 (adder, viperă)

Common in mountainous regions, less common in hilly regions and rare in lowlands. Only few localities were found in the Western Plain: Năroieni in Satu-Mare district, Oradea, Băile 1 Mai, Betfia and Felcheriu in Bihor district and Ghioroc in Arad district.



Fig. 27. New localities for *Vipera berus* in Transylvania

28. *Vipera ammodytes* (Linnaeus) 1758 (nose-horned viper, viperă cu corn)

The *V. a. ammodytes* subspecies is restricted to southern districts: Hunedoara, Alba, Sibiu and Arad. Isolated populations only in southern slopes, with scree and shrub vegetation, especially limestone gorges or quarries.

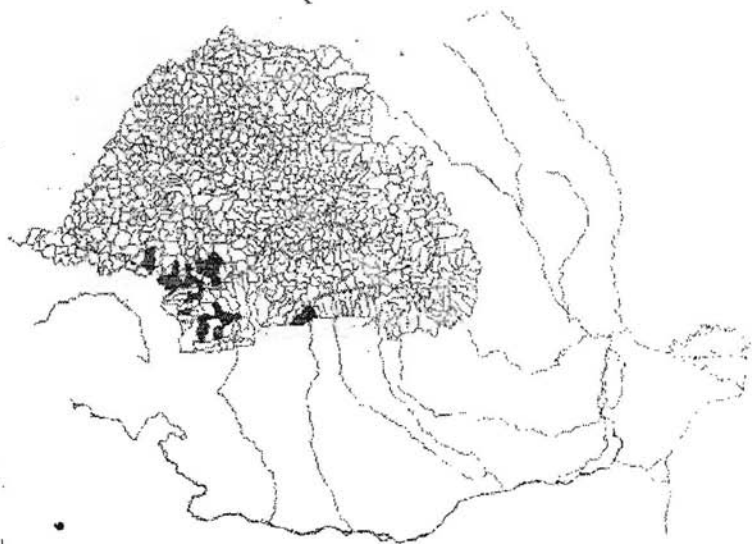


Fig. 28. New localities for *Vipera ammodytes ammodytes* in Transylvania

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Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Ss	Tv	Tc	Ta	Tm	Bub	Bgy	Pf	Bub	Buf	Ha	Rr	Rd	Ra	Ep	Lvr	Ea	Lvr	Lp	Pm	Af	Nn	Nt	Ca	Ei	Vb	Ya
BOCSIG	BOCSIG	0	1	1	0	0	1	0	1	0	1	1	1	0	1	1	0	0	0	0	0	0	1	1	0	0	0	
BUESTI	PLESCUTA	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
CALUGARENI	FELNAC	0	1	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CAPLNAS	BIRCHIS	0	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	
CAPRUTA	BIRZAVA	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	
CARAND	CARAND	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	
CASOALA	TRNOVA	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
CERMEI	CERMEI	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
CHELMAC	CONOP	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	
CHISINEU-CRIS	CHISINEU-CRIS	1	1	0	0	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	
CLADOVA	PAULIS	1	1	0	1	0	1	0	1	0	0	0	1	1	0	0	1	1	0	0	1	0	1	1	1	1	0	
CLIT	HASMAS	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	
CONOP	CONOP	0	0	0	0	1	1	0	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	1	0	0	
COVASINT	COVASINT	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
CRAIVA	CRAIVA	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CURTICI	CURTICI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DEZNA	DEZNA	1	1	0	0	0	1	0	1	0	1	0	1	1	1	0	0	1	0	0	0	0	1	1	0	1	0	
DIETI	DIETI	1	1	1	0	0	0	1	0	0	1	1	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	
FINTINELE	FINTINELE	0	0	0	0	1	0	1	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
GHIOROC	GHIOROC	0	1	0	0	1	1	1	0	1	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	0	
GURAHONT	GURAHONT	0	0	1	0	0	1	0	0	1	1	1	1	1	0	0	1	1	0	0	1	0	1	0	1	0	0	
HALMAGEL	HALMAGEL	1	0	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	
HALMAGIU	HALMAGIU	1	0	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	
HODIS	BIRSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INEU	INEU	0	1	1	0	0	1	0	0	1	1	1	1	0	1	0	1	0	0	0	0	0	1	1	0	0	0	
IRATOSU	IRATOSU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LABASINT	SISTAROVAT	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	
LIPOVA	LIPOVA	0	1	0	0	1	0	1	1	1	1	1	1	0	1	1	0	1	0	0	0	1	1	1	1	1	0	
LIVADA	LIVADA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MADRERAT	PINCOTA	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MADRIGISTI	BRAZI	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MINDRULOC	VLADIMIRI-SCU	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MONIASA	MONIASA	1	0	0	1	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	







Annex 1 (continued): the abbreviations correspond to table 2)

LOCALITY	LOWN	Ss	As	Tc	Ta	Tm	Bob	Bav	Pr	Bub	Baf	fla	Rr	Rd	Ra	En	Lx	La	Lsv	Lp	Pm	Mf	Nr	Ca	Ei	Vb	Va	
DRAGH-SI		1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	
FELC III REU		0	1	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0
FINIS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0
LUGHU		0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GALOSPTEIU		0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
GIRSU DE CRIS		0	1	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
GIRSU NEGRU		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
GURBEDIU		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIABU		0	1	1	0	0	0	1	0	0	0	1	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0
HIDISELU DE JOS		1	1	1	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
HIDISELU DE SUS		0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0
HUSASAU DE CRIS		1	1	1	0	0	1	1	0	0	0	1	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0
INEU		0	1	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INEUL DE CRIS		0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0
LESU		0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVADA DE BIHOR		0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
LUGASU DE SUS		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LUNCSOARA		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
MARGHITA		0	1	0	0	1	0	0	1	0	1	1	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0
MEZIAD		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEZITEA		0	1	1	0	0	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
MIERLAI		0	1	1	0	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0
MERSIG		0	1	1	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0
NOJORID		0	1	0	0	0	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
OLCEA		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ORADEA		1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	0	0	0	0	1	1	0	1	0	0
OSORHIEI		0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
OTOMANI		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
PADIS		1	1	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PADUREA NEAGRA		0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PAGAJA		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PALEU		0	1	1	0	0	1	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0
PALOTA		0	1	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0



Annex 1 (continued) (the abbreviations correspond to table 2)

TOWN	Ta	Tc	Ta	Tm	Bob	Box	Pf	Boh	Bat	Its	Rr	Ri	Rd	Ra	Co	Lst	La	Lsv	Lp	Pm	Af	Nn	M	Ca	El	Vb	Va
FALU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
BATAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TILFAGD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
TINCA	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
GIRSU DE CRIS	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
ULFACE DE BEIUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
VADU CRISLUI	1	1	0	0	1	0	1	0	0	0	1	1	0	0	1	1	0	0	1	1	0	1	0	1	0	0	
VALEA IADULUI	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
VALEA LUI MIHAI	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
VASAD	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
VASCAU	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
VOIVOZI	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
POPESTI	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BISTRITA-NASAUD district																											
AGRIS	1	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	
TIRLISUA	1	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	
AGRIESEL	1	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	
ARCALIA	1	1	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	0	1	0	
SIRU-MAGHERUS	1	1	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	0	1	0	
ARCUIUD	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	
TEACA	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	
BECLEAN	0	1	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	
BELEAN	0	1	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	
NOSENI	0	1	0	0	0	1	0	1	0	1	1	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	
BEUDIU	0	1	0	0	0	1	0	1	0	1	1	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	
MARISLU	0	1	0	0	0	1	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	0	1	0	
BOZUIS	1	1	0	0	0	1	0	1	0	1	1	0	1	0	0	1	1	0	0	0	0	1	1	0	0	0	
BRATENI	1	1	0	0	1	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	0	0	
SINMIRAU DE CIMPIE	1	1	0	1	0	1	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	1	0	
CICEU-GURGESTI	1	1	0	1	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1	0	1	0	
BREAZA	1	1	0	1	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1	0	1	0	
BUDACU DE JOS	1	1	0	0	0	1	0	1	0	1	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
BUDACU DE SUS	1	1	0	0	0	1	0	1	0	1	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
CEPARI	0	1	0	0	0	1	0	1	0	1	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	
DUMITRA	0	1	0	0	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	
CEŢATE	1	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	
CHIOCIHS	1	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	
CHIOCIHS	1	0	0	0	0	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	1	0	
CICEU-CORABIA	1	1	0	0	0	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
CICEU-GURGESTI	1	1	0	0	0	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
CICEU-GURGESTI	1	1	0	0	0	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
CIREASI	1	0	0	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0	
TIRLISUA	1	0	0	0	0	1	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	
SINTEREAG	0	1	0	0	0	1	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	0	0	
COCIU	0	1	0	0	0	1	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	0	0	
BISTRITA BIRGAULUI	1	0	0	1	0	0	1	0	1	0	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
COLIBITA	1	0	0	1	0	0	1	0	1	0	1	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	
CORMAIA	1	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	
COSBUC	1	1	0	0	0	0	1	0	1	0	1	1	1	0	0	1	0	0	0	0	0	1	0	0	1	0	
COSBUC	1	1	0	0	0	0	1	0	1	0	1	1	1	0	0	1	0	0	0	0	0	1	0	0	1	0	

Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Sr	Tc	Ta	Tm	Boh	Boy	Pf	Bib	Buf	He	Rf	Rt	Rd	Ra	Es	Lrt	Es	Lrv	Lp	Pm	At	Nt	Nt	Cs	El	Vb	Va
CRISTUR-SIEU	SIEU-DORHEI	0	1	0	0	1	1	0	1	0	1	1	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0
CUSMA	LIVEZILE	1	0	0	1	0	0	0	1	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0
DEAUL STEFANIEI	ROMULI	1	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0
DOMNESTI	MARISELU	0	1	1	0	0	1	0	0	1	1	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
DOROLEA	DOROLEA	0	0	1	0	0	1	0	0	1	0	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0
DUMBRAVA	NUSENI	1	1	0	0	0	1	0	1	1	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	1	0
DUMBRAVENI	CICEU-GIURGISTI	1	1	0	0	1	1	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	1	0
DUMBRAVITA	CALANU-MIC	1	0	0	0	1	0	1	0	0	1	1	1	0	0	1	0	1	0	0	0	1	1	0	0	1	1	0
DUMITRA	DUMITRA	0	1	1	0	0	1	0	0	1	1	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
FELEAC	NUSENI	1	1	0	0	1	0	0	1	1	1	1	0	0	1	1	0	1	0	0	0	1	1	0	1	1	0	0
FIAD	TELCIU	1	0	0	0	0	0	0	1	0	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	1	0
FIGA	BECLEAN	0	0	1	0	0	1	0	1	0	1	1	1	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0
GHINDA	BISTRITA	1	1	0	0	0	1	0	1	0	1	1	1	1	0	0	1	0	0	1	0	1	1	1	1	0	1	0
ILASIA	URIU	1	1	0	0	0	1	0	1	0	0	1	1	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0
ILVA MICA	ILVA MICA	1	1	1	0	0	1	1	0	1	1	1	1	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0
JOSENI BIRGAULUI	JOSENI BIRGAULUI	0	0	0	0	0	1	0	1	0	0	1	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0
LECHINTA	LECHINTA	0	0	0	0	0	1	1	1	1	1	1	0	1	0	1	1	0	0	1	0	0	1	1	0	1	1	0
LILESTI	REIAG	1	1	0	0	0	1	0	1	1	1	1	1	0	1	0	0	1	0	0	0	1	1	0	0	1	1	0
MANIC	CHOCIS	1	0	1	0	0	0	1	1	1	1	1	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0
MARISELU	MARISELU	0	1	0	0	0	1	0	1	0	1	1	0	1	1	0	1	1	0	0	0	0	1	1	0	1	0	0
MATEI	MATEI	1	0	0	0	0	1	0	1	1	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	0	0
MICESTII DE CIMPIE	MICESTII DE CIMPIE	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	0	0	1	1	1	1	0	0
MIRUS	CHUZA	1	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	0	1	0
MOLDET	TELISUA	1	1	0	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	1	1	0	0	1	0
MURSENI BIRGAULUI	THIA BIRGAULUI	1	0	0	1	0	0	1	0	0	1	1	0	1	0	0	1	1	0	0	1	0	1	0	0	1	1	0
NEGRILESTI	CICEU-GIURGISTI	1	0	0	0	0	1	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	0	0
NETIGEA DE JOS	NEMIGEA	1	0	0	0	0	1	0	1	1	1	1	1	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0
NUSENI	NUSENI	1	0	1	0	0	1	1	1	1	1	1	0	1	0	1	1	0	0	1	0	0	1	1	0	0	1	0
ORHEU BISTRITII	CETATE	0	0	0	0	0	1	1	1	1	1	1	0	1	0	1	1	0	0	1	1	0	0	1	0	0	1	0
PARVA	PARVA	1	0	0	1	0	1	0	1	0	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	1	0
PASUL ROTUNDA	SANT	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0
PETROS	CETATE	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	1	1	0	0	1	1	0	0	1	0	0
PIA PRA	CHUZA	1	1	1	0	0	1	1	1	1	1	1	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0

Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Sx	Ta	Tc	Ta	Tm	Bob	Box	Ph	Bub	Buf	Hs	R7	Rt	Rd	Ra	Er	Lv	Ls	Ip	Pm	Mf	Nm	Ni	Ca	El	Ub	Va
PIATRA FINTINILE	THIA BERGAULUI	1	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0
RAGHA	CHITATE	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	1	0
RETSAG (PEFRU RARUS)	RETEAG	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0
ROMULI	ROMULI	1	1	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0	1	0
RUSU DE JOS	BECLLEAN	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0
RUSU DE SUS	NUSENI	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
SALCUTA	SINMIHAU DE CIMPIE	0	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
SALVA	SALVA	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	1	0
SANT	SANT	1	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	1	0	0	1	1	0	0	1	0	0
SARATA	BISTRITA	0	1	1	0	0	0	1	0	1	1	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	1	0
SARATEL	SIEU-MAGHERUS	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0
SASARM	SASARM	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0
SIEU	SIEU	0	1	1	0	0	0	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	0	0
SIEU-MAGHERUS	SIEU-MAGHERUS	0	1	1	0	0	0	1	0	1	1	0	1	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0
SIEU-SPINTU	SINTEAREAG	0	1	0	0	0	1	0	0	1	0	1	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
SINGFORZU NOU	LECHINTA	0	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
SINACOB	LECHINTA	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	0
SINMIHAU DE CIMPIE	SINMIHAU DE CIMPIE	0	0	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	1	0	1	1	0	0	0
SINTEAREAG	SINTEAREAG	0	1	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	1	1	0	0	0	0
STRUGURENI	CHIOCHIS	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	0	0
STUPINI	SINMIHAU DE CIMPIE	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
TARPIU	DUMITRA	0	1	1	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0
TELCSOR	TELCSIU	1	1	1	0	1	0	1	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	1	0
TELCSIU	TELCSIU	1	1	1	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	0
TIRLISUA	TIRLISUA	1	1	0	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0
TONGJUI	GALATI BISTRITEI	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
VALEA MARE	SANT	1	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0
BRASOV district																												
APATA	APATA	0	0	0	0	0	1	0	1	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
CODLEA	CODLEA	1	1	0	1	0	0	1	0	1	0	0	1	1	0	0	1	1	0	0	1	1	1	1	0	0	1	0
HOGHIZ	HOGHIZ	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0
HOMOROD	HOMOROD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0
MAIERUS	MAIERUS	1	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0

Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Sr	Tv	Tc	Ta	Tm	Bob	Bgv	Pt	Bub	Barf	Fis	Rr	Rt	Rd	Ra	Ep	Lvr	Es	Lv	Ep	Pm	AF	Nb	Nf	Cs	El	Vb	Va
ORMENIS	ORMENIS	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	1	1	0
RACOS	RACOS	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	1	1	0
RUPEA	RUPEA	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	0	0
VOILA	VOILA	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	CLUJ district																												
AGHIRESU	AGHIRESU	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	0
AITON	AITON	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
ALUNIS	ALUNIS	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0
APAHIDA	APAHIDA	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0
ASCHILEU MARE	ASCHILEU MARE	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	0
ASCHILEU MIC	ASCHILEU MIC	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	0
BARUTIU	BARUTIU	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	0
BAISOARA	BAISOARA	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0
BERCHESU	BERCHESU	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0
BOBALNA	BOBALNA	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	0	0
BOUDUT	CEANU MARE	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
BOLOGA	POIENI	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	0
BONT	FIZESU GHERLII	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	1	1	0
BONTIDA	BONTIDA	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	0
BORSA	BORSA	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
BOTENI	MOCVI	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	0
BURU	IARA	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0
CAMPENESTI	APAHIDA	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0
CAIANU-VAMA	CAIANU	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0
CALATA	CALATELE	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0
CAMARASU	CAMARASU	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
CAPRIDARA	RICHA CRISTUR	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0
CARUSUL MARE	CARUSUL MARE	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	1	0	0
CASEJU	CASEJU	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0
CEANU-MARE	CEANU-MARE	0	1	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0
CHINTENI	CHINTENI	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0
CIUJESTI	CIUJESTI	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0
CLUJEA	CLUJEA	1	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0

Annex 1 (continued): the abbreviations correspond to table 2)

LOCALITY	Ss	Fs	Tc	Ts	Im	Bob	Bov	Pr	Bob	Ber	Fla	Rr	Rt	Rd	Ra	En	Ler	La	Lvs	Lp	Pm	AF	Nr	Ca	El	Vb	Va	
CIUMAFALIA	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	1	1	0	
CLUJ	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	1	1	0	1	0
COJOCNA	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0
COLONIL	0	1	1	0	0	1	1	0	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
CORNISTI	1	1	1	0	0	0	1	0	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	1	1	0
CRISENI	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	1	0	1	1	1	1	1	1	0
DABACA	1	0	0	0	0	0	1	0	1	1	0	1	1	1	1	0	1	0	1	0	0	1	1	1	0	1	1	0
DEUSU	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	1	1	0	0
DRETA	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
DUMBRAVA	1	1	1	0	0	0	1	0	1	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	1	0
FALCA	0	0	0	0	0	1	1	0	1	1	0	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
FIJEA DE JOS	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0
FIZESU GHERLII	0	1	1	0	0	0	1	0	0	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	1	1	1	0
FODORA	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0
FRATA	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
FUNDATURA	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
GADALIN	0	1	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
GARBAU	1	1	1	0	0	0	1	0	1	1	0	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	0	0
GEACA	0	0	1	0	0	1	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	0	1	1	0	0	0	0
GHERLA	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	0	1	1	0	0	0	0
GILAU	1	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	1	0
HUEDIN	1	1	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0
IARA	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
ICLOD	1	1	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	0	1	1	0	0	0
IGRITA	0	0	1	0	0	0	1	0	1	1	0	1	1	1	0	0	1	1	0	0	0	1	0	1	0	0	0	0
JUCU DE SUS	0	0	0	0	0	0	1	0	0	1	0	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
LEGIHA	1	0	1	0	0	0	1	1	0	1	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	1	0	0
LITA	0	1	0	0	0	0	1	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	1	1	0	0
LITENI	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
LIVADA	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0
LUJERIU	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
LUNA	0	1	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0
LUNA DE JOS	1	0	1	0	0	0	1	0	1	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	0	0



Annex I (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Ss	Tv	Tc	Ta	Tm	Bob	Eob	Pf	Bob	Buf	Ha	Rr	Rt	Rd	Ra	Eo	Lvr	La	Lvv	Lp	Pm	Af	Nu	Nt	Ca	El	Vb	Va	
LUNA DE SUS	FLORESTI	0	0	0	0	0	0	1	0	1	1	0	1	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	
LUNCA VISAGULUI	POJENI	1	1	0	1	0	0	1	0	1	1	0	1	1	1	0	0	0	1	1	0	1	1	1	0	1	1	1	0	
LUNCANI	LUNA	0	1	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0	
MAGURA IERI	IARA	0	1	0	0	0	1	0	0	1	0	0	1	1	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0	
MAGURI	MAGURI-RACATAU	1	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	0	1	0	
MAGURI-RACATAU	MAGURI-RACATAU	1	0	0	1	0	0	1	0	1	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	1	1	0	
MANASTIRENI	MANASTIRENI	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	0	1	1	0	0	1	1	1	1	0	0	0	0	
MARISEL	MARISEL	1	0	1	1	0	0	1	0	1	0	0	1	0	0	0	0	1	1	0	0	1	1	0	0	0	0	1	0	
MIHAI VITEAZU	TURDA	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	1	0	1	0	0	0	0	1	1	0	0	0	0	
MOCIU	MOCIU	1	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	1	0	
MOLDOVENESTI	MOLDOVENESTI	0	0	0	0	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	0	1	1	1	0	0	1	1	0	
MORAU	CORNESTI	1	1	0	0	0	1	0	1	0	1	1	1	1	0	0	1	1	0	0	1	1	1	1	0	0	1	1	0	
MURESENI DE CAMPIE	PALATCA	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	1	1	0	0	1	1	0	0	0	0	
NAGIU	CAMARASU	0	0	0	0	0	1	0	1	0	1	1	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	
NEGRENI	CITUCEA	1	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	1	1	1	0	1	1	1	0	
NICULA	FIZESU GHERLII	1	0	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	0	1	0	0	1	1	0	0	1	0	
NIRES	MICA	1	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	1	0	0	1	1	0	0	1	0	
OCNA DEJULUI	DEJ	1	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	0	0	
OSORHEL	BOBALNA	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	1	0	
PALATCA	PALATCA	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	
PANTICEU	PANTICEU	1	1	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	1	1	1	0	0	1	1	0	
PETEA	PALATCA	0	1	0	0	1	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	
PETRESTII DE JOS	PETRESTII DE JOS	1	1	1	0	0	1	0	1	0	1	1	1	1	1	0	1	1	0	1	1	0	0	1	1	0	0	1	1	0
PLOSCOS	PLOSCOS	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	
POJENI	POJENI	1	0	0	0	0	1	0	0	0	0	0	1	1	1	0	1	1	0	1	0	0	1	1	0	0	0	0	0	
RASCRLUCI	BONTIDA	0	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RECEA CRISTUR	RECEA CRISTUR	0	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
RISCA	RISCA	1	0	0	1	0	0	1	0	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	0	0	1	1	0	
ROGOJEL	SACUIEU	1	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	1	0	0	
RUGASESTI	CASHU	1	0	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	0	1	0	0	
SACALALA	FIZESU GHERLII	1	1	0	0	0	1	0	1	0	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	0	0	0	0	
SACHEL	BAISOARA	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	
SALICEA	CIURILA	1	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	1	0	0	1	1	1	0	0	1	1	0	





Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	Ss	Tv	Tc	Ta	Tm	Bsb	Bw	Pf	Bsb	Bbf	Hs	Rr	Rd	Rca	Ea	Lvt	La	Layv	Lp	Pm	Ad	Nn	Nt	Ca	El	Vb	Va
AITA MARE	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0	0	0	0	
ARIUSD	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	0	1	0	
BALVANYOS	1	0	0	0	0	0	1	0	1	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	
BELIN	1	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	1	1	0	0	1	1	1	0	1	0	
BICSAD	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	1	1	
BITA	1	0	0	0	0	1	0	1	0	0	1	1	1	1	1	1	0	1	1	0	1	1	1	0	1	0	
BODOC	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	0	1	0	
BOROSNEU-MARE	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	
BRATES	0	0	1	0	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0	0	
CATALINA	0	0	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0	0	0	
CHICHS	0	0	1	0	0	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	0	1	1	0	0	0	
CHILENI	1	0	1	0	0	1	1	1	0	1	1	1	1	1	1	0	1	1	0	0	1	1	1	0	0	1	
COVASNA	0	0	1	0	0	1	1	1	1	0	1	1	1	1	1	0	1	1	0	0	1	1	0	0	0	0	
GHELINTA	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	0	0	0	
HAGHIG	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	1	0	
ILJENI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LEMNIA	0	0	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	0	
MICHALAU	1	1	0	0	0	0	1	0	1	0	1	1	1	1	1	0	1	0	0	0	1	1	0	0	1	0	
MICLOSDARA	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	
MOACSA	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	0	
OZUN	0	1	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	0	
PADURENI	0	0	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	0	0	
RECI	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	0	
SF-GHEORGHE	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	0	
SINTHONLUNCA	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	
SINZIENI	0	0	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	
SURCEA	0	0	0	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	
TRIGULSUCESC	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	
TURIA	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	
VIRGHIS	1	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	
ZALAN	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	
HARCHITA district																											
BORZONI	0	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0	0	1	1	0	0	1	0	0	1	0	



Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	Sx	Tv	Tr	Ta	Tm	Bab	Boav	Pf	Bub	Buif	Hia	Rr	Rd	Ra	So	Lx	Lxv	Lp	Fe	Al	Ni	Nr	Ca	Et	Vb	Va
TORN																										
SINCRĂIENI	0	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0
SINTIMBRU	1	1	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	1	1	0	1	0	1	0	0
SURCETATE	0	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0	1	1	0	1	0	1	0	0
SUSIENI	0	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0	1	0	0	1	0	1	0	0
TOMESTI	1	1	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0
TOPLITA	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0	1	0
TUSNAD	1	0	1	1	0	0	1	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	1	1	0
VALE	0	1	1	0	0	0	1	0	1	0	1	1	1	1	0	0	1	0	1	0	1	1	0	0	1	0
VALEA STRIMBA	0	1	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0
VIGANI	1	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0
VOSLABENI	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0
ZENCANI	0	1	1	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0
HUNEDOARA district																										
ARDEJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
BACIA	1	1	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	1	1	0	1	0	0	0	0
BALA DE CRIS	1	0	0	0	0	1	0	0	1	0	1	1	1	1	0	1	1	0	0	0	1	0	0	0	0	0
BAITA	1	1	0	0	1	1	0	1	0	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0
BALSA	0	1	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	0	1	1	1	0	1	0	1
BANITA	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	1	1	0	0	0	1	0
BARU	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0	1	0	0	1	0	0	0	0	1	0
BATRINA	1	0	0	0	0	1	0	1	0	1	1	1	1	1	0	0	1	0	0	1	1	0	0	0	1	0
BERIU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BEJARI TIRNAVITELI	0	1	0	0	1	1	0	1	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0
BLAJENI	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
BOBINA	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
BOSOROD	0	0	0	0	0	1	0	1	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0
BOUSA MICA	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0
BOZITA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOZ	0	0	1	0	0	0	1	0	1	1	1	1	1	1	0	1	1	0	0	1	1	0	0	1	0	0
BRAD	1	1	0	0	0	1	0	1	0	1	1	1	1	1	0	1	1	0	0	0	1	1	0	1	0	0
BRANISCA	0	0	0	0	0	1	0	0	1	0	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0
BRITLA MURESANA	0	1	1	0	0	1	0	0	1	0	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0
BRUCI DE SUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GURASADA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRITLA ROMANA	0	0	0	0	0	1	0	1	0	1	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	0



Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Ss	Tv	Tc	Ta	Tm	Bob	Bey	Pr	Bub	Baf	Ha	Rr	Rt	Rd	Rq	En	Luv	La	Luv	Lp	Pm	Af	Nh	Nt	Cs	Ei	Vb	Va
HALEG	HALEG	1	1	1	0	0	0	1	0	1	1	1	1	1	0	1	0	1	1	0	0	0	1	1	0	0	0	0	
HUNEDOARA	HUNEDOARA	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ILIA	ILIA	0	0	1	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LAPUGU DE SUS	LAPUGU DE JOS	1	1	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	1	
LELESE	LELESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
LUNCA-CERNII DE JOS	LUNCA-CERNII DE JOS	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
LUNCOIU DE JOS	LUNCOIU DE JOS	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LUPENI	LUPENI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MADA	BALSA	0	1	0	1	0	0	1	0	1	1	1	1	1	0	0	1	0	0	1	0	0	1	1	0	1	0	1	
MESTECAN	RACHITOVA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
MIHAILENI	BOCES	1	1	0	0	0	0	1	0	1	0	1	1	1	1	0	0	1	0	0	1	0	0	1	0	0	1	0	
MINTIA	DEVA	0	0	1	0	0	0	1	0	0	0	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	
NUCSOARA	SALASU DE SUS	1	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	1	0	0	1	0	
MARTINESTI	MARTINESTI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ORASTIE	ORASTIE	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OHABA DE SUB PATRA	SALASU DE SUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
OHABA PONOR	PUI	1	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
ORASTIOARA DE SUS	ORASTIOARA DE SUS	1	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	
PISTISU MIC	PISTISU MIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PESTEANA	PESTEANA	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PETRIILA	PETRIILA	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
POJOGA	ZAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
POENITA TOMII	CERBAL	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
PATRA	BATRINA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
PETROSANI	PETROSANI	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PUI	PUI	1	0	0	0	0	0	1	0	1	1	0	1	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	
RACHITOVA	RACHITOVA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RAPOLTU MARE	RAPOLTU MARE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RIBITA	RIBITA	0	1	0	0	0	0	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
RIU DE MORI	RIU DE MORI	1	1	0	0	0	0	1	0	1	1	1	1	1	0	1	0	0	1	1	0	0	1	0	0	1	0	1	
ROSCANI	DOBRA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
ROMOS	ROMOS	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SACARIMII	CLITIEU DE SUS	1	1	0	1	0	0	1	0	1	1	1	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	0	

Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Bab	Box	Pf	Bab	Bub	Ha	Rf	Rd	Ra	Es	Lvr	La	Lvs	Lp	Fm	AF	Na	Nf	Co	El	Vb	Vj	
SALASU DE SUS	SALASU DE SUS	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	0	1	0
SARMIZIGETUSA	SARMIZIGETUSA	0	1	0	0	0	1	0	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0
SIMBRIA	SIMBRIA	0	1	0	0	0	1	1	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
SIMPETRU	SINTAMARIA-ORLEA	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
SINTUJALM	SINTUJALM	1	1	0	0	0	0	1	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0
SINTAMARIA-ORLEA	SINTAMARIA-ORLEA	1	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0
SUSENI	RIU DE MORI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
SOIMUS	SOIMUS	0	0	1	0	0	1	0	1	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0
TAIA	PETRELA	0	0	1	0	0	1	0	0	1	1	0	0	1	0	1	1	1	0	0	1	0	1	0
TURNAVA DE CRIS	VATA DE JOS	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
TELIUCU INFERIOR	TELIUCU INFERIOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOMESTI	TOMESTI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOPLITA	TOPLITA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTESTI	TOTESTI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TURDAS	TURDAS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNIREA	UNIREA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URICANI	URICANI	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URICANI	URICANI	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VARMAGA	CERTEAU DE SUS	1	0	0	0	0	1	0	1	1	0	1	1	0	0	1	1	1	0	1	1	0	1	1
VALISOARA	VALISOARA	1	1	0	0	0	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
VATA DE SUS	VATA DE JOS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VATA DE JOS	VATA DE JOS	1	1	0	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0
VETEL	VETEL	1	1	0	0	0	1	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	1	0
VORTA	VORTA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VULCAN	VULCAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZAM	ZAM	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0
MARAMURES district																								
ARDUSAT	ARDUSAT	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ARDUZEL	ULMENI	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARIESUL DE CIMP	ARDUSAT	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAIA MARE	BAIA MARE	1	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAIA SPRIE	BAIA SPRIE	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAIA SPRIE	BAIA SPRIE	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAITA	BAITA	1	1	1	1	0	0	1	1	1	1	0	1	0	0	1	1	1	0	0	1	0	0	1





Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Sk	Tv	Tc	Ta	Tm	Boh	Bov	Pf	Bub	Bul	Hs	Kr	Rt	Rd	Ra	Ev	Lvr	La	Luv	Lp	Pm	Af	Nn	Nt	Ca	El	Nb	Va
M-TII IGNIS	BAIA SPRIE	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
NISTRU	TAUTII-MAGHERAUS	0	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
PASUL GUTAI	BAIA SPRIE	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
POSTA	REMETEA CHIOARULUI	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRIBILESTI	SATULUNG	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
RECEA	RECEA	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
REMECIOARA	REMETEA CHIOARULUI	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REMETEA CHIOARULUI	REMETEA CHIOARULUI	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
RUS	DUMBRAVITA	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SABISA	SEINI	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SACALASENI	SACALASENI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SALSIG	SALSIG	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SASAR	RECEA	0	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SATU NOU DE JOS	GROSI	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SATULUNG	SATULUNG	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SEINI	SEINI	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SIRBI	FARCASA	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
TAUTII MAGHERAUS	TAUTII MAGHERAUS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0
TOIAT	ULMENI	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULMENI	ULMENI	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULMOASA	TAUTII MAGHERAUS	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UISEU DE SUS	UISEU DE SUS	1	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0
MURES district																													
ACATARI	ACATARI	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	1	0	0	0	0	1	1	0	1	0	0	0
ALBESTI	ALBESTI	1	1	0	0	1	1	1	1	1	0	1	1	1	1	0	1	1	0	0	0	0	1	1	1	0	1	0	0
APOLD	APOLD	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	1	0	1	0	0
BALAUERI	BALAUERI	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
BAND	BAND	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	1	0	1	0	0
BEZID	SINGERGHIU DE PADURE	1	1	0	0	1	1	0	1	0	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	0	0
BICHIS	BICHIS	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	0	0	1	0	0	0
BRINCOVENESTI	BRINCOVENESTI	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	1	0	0	0	0	0
CAPETI	SOVATA	1	1	0	0	0	1	1	0	1	0	1	0	0	1	1	0	1	0	1	0	1	0	0	1	0	0	1	0
CEUAS	MICA	0	1	1	0	0	1	0	0	1	1	1	0	0	1	0	1	1	0	0	0	0	1	0	0	1	0	0	0

Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	St	Ta	Te	Ta	Tr	Bab	Bow	Pf	Bub	Buf	Hu	Rr	Rt	Rd	Ra	Eh	Lvr	La	Lvc	Lp	Pm	AF	Nb	Mt	Ca	El	Vb	Va
CHENDJ	0	0	0	0	0	1	1	0	1	0	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	1	0	0
CHIBEG	1	0	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	1	0	0	0	1	1	0	1	1	0	0
CHINCUS	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	0	0	0
CIBU	1	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	0	0	0
CIPAU	0	1	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	1	1	0	0	0
CLOASTERF	1	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	1	0
CORUNCA	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	0	0	1	0	0	0
CRACUNESTI	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
CRAESTI	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
CUCERDEA	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
CUND	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	0
DANES	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
DEAJ	0	0	0	0	0	1	1	0	0	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
DEDA	1	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	0	0	0	0	0
DELENI	0	1	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
DUMITRENI	0	1	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	1	0
DUNBRAVICIARA	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
EREMENI	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
FARAGAU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0
FINTINELE	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	0
GAJEST	1	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
GHEORGHE DOJA	0	0	0	0	0	1	1	0	0	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
GHINDARI	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	0
GOGAN	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	0
GREBENISU DE CAMPIE	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0
GRUISOR	1	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
HEFTUR	0	1	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
ICLANZEL	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
IERNUT	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
IOD	1	1	0	1	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
IACU	1	1	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0
LUFORDENI	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	0
LUDUS	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	0







Annex 1 (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Ss	Tv	Tc	Ta	Tm	Bob	Bov	Pf	Bub	Buf	Ha	Rr	Rt	Rd	Ra	Eo	Lvr	Lz	Lp	Pm	Af	Nb	Nt	Ca	Ei	Vb	Va
MOFTINU MARE	MOFTIN	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MOFTINU MIC	MOFTIN	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEGRESTI-OAS	NEGRESTI-OAS	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	1	0	1	0	
ORASU-NOU	ORASU-NOU	0	0	0	0	1	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0	
ORASU-NOU-VII	ORASU-NOU	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PAULIAN	DOBA	0	0	0	0	1	0	1	1	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
PETRESTI	PETRESTI	0	0	0	0	1	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
PIR	PIR	0	0	1	0	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
PIRU NOU	PIR	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	
PISCARI	TEREBESTI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PORTITA	TIREAM	0	0	0	0	1	0	0	1	1	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	
PRILOG	ORASU-NOU	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RACSA	ORASU-NOU	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RADULESTI	CAJAS	0	1	1	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
REMETEA-OAS	ORASU-NOU	0	1	1	0	0	1	0	0	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	
SANTAU	SANTAU	0	1	1	0	0	1	0	0	1	1	0	0	0	0	1	1	0	0	1	0	0	0	1	0	0	0	
SATU MIC	SATUMARE	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
SATU MAREL	CRAIDOROLT	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SINMICLAUS	MOFTIN	0	0	1	0	0	1	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
SUDURAU	SANTAU	0	0	0	0	1	0	0	1	1	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	
TARNA-MARE	TARNA-MARE	0	1	1	0	0	1	0	1	1	1	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	
TARSOLT	TARSOLT	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TASNAD	TASNAD	0	0	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TEGHIA	CRAIDOROLT	0	1	1	0	0	1	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
TEREBESTI	TEREBESTI	0	0	0	0	1	0	1	1	1	1	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	
TIREAM	TIREAM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
TRAIAN	DOBA	0	1	1	0	0	1	0	1	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
TRIP	BIXAD	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TUR	NEGRESTI-OAS	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TURT	TURT	0	1	1	0	0	1	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	
TURULUNG	TURULUNG	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
URZICINI	URZICINI	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	
VAGAS	TARNA-MARE	0	1	0	0	1	0	1	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	



Annex 1. (continued) (the abbreviations correspond to table 2)

LOCALITY	TOWN	Ss	Tv	Tc	Ta	Ta	Ta	Bob	Bank	PT	Bub	Bif	Hs	Rc	Rt	Rd	Ra	En	Lsv	Ls	Lsv	Ep	Fm	af	Nu	Nt	Ca	El	Vb	Va
DOBRIN	DOBRIN	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	
DRIGHIU	HALMASD	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FABRICA	GIRBAU	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	1	0	1	0	0	
FALCUSA	POLANA BIENCIHII	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	0	
FETINDIA	MESESENI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
FINTINELE	DRAGU	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	
FINTINELE RUS	RUS	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	
FIZES	SIG	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	
GILGAU	GILGAU	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	0	
GILGAU ALMASULUI	BALAN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
GIRBOU	GIRBOU	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	
GIRBOU ALMASULUI	BALAN	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	1	0	0	
GILOD	GILGAU	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	6	0	0	0	1	1	0	1	0	1	
HALMASD	HALMASD	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HOROATU CRASNEI	HOROATU CRASNEI	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	
HUSENI	CRASNA	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	
HUTA	BUCIUM	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	
ILEANDA	ILEANDA	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	0	1	0	
JAC	CREACA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	
JIBOU	JIBOU	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
LAZURI	VALCAU DE JOS	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	
LOZNA	LOZNA	1	0	0	0	0	0	1	0	1	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	1	1	0	0	
LUPOMIA	CREACA	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	1	1	1	0	0	0	0	
MARISTE	MARISTE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MARGURA	POLANA BIENCIHII	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
MALENI	ILEANDA	1	0	1	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	0	0	0	0	
MINEU	SALANTIG	1	0	1	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	
MOJGRAD	MIRSID	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
NAIMEN	DOBRIN	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	
NAPRADEA	NAPRADEA	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
NUSFALAU	NUSFALAU	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	0	1	0	
PADURIS	HIDA	0	1	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	0	0	0	0	
PALSA	ROMANAS	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	0	1	0	0	0	











Table 7. Number of localities for each herpetofaunal species in the 12 districts of Transylvania. *As*: *Asp. nuda* (subgenus); *Tr*: *T. striatus*; *Tc*: *T. cristatus*; *Ta*: *T. alpestris*; *Tr*: *T. monticola*; *Bov*: *Bombina orientalis*; *Bo*: *B. orientalis*; *Pl*: *Palafoxes lineatus*; *Bub*: *B. bufo*; *Baf*: *B. asper*; *Ha*: *Hyla arborea*; *Rt*: *R. lessonae* complex; *Ri*: *R. lessonae*; *Ra*: *R. aetnensis*; *Eo*: *Eurycea scolopendria*; *Lvr*: *Lacerta viridis*; *La*: *L. agilis*; *Lvs*: *L. vivipara*; *Up*: *L. praticola*; *Pm*: *Pedersani muricata*; *M*: *Mesaspis*; *Nu*: *Natrix natrix*; *Ni*: *N. tessellata*; *Ca*: *Crotalus* (subgenus); *Ep*: *Euphrasia*; *Vh*: *Vipera berus*; *Va*: *V. ammodytes*.

District	No. of localities	Ss	Ts	Tc	Ta	Tr	Bov	Bo	Pf	Bub	Baf	Ha	Rt	Ri	Ra	Eo	Lvr	La	Lvs	Up	Pm	M	Nu	Ni	Ca	Ep	Vh	Va	Total	
Alba	57	32	37	17	10	0	3	50	1	48	22	14	26	44	30	0	0	29	67	14	0	38	41	34	17	21	23	29	1	638
Arad	72	12	32	25	8	0	21	16	9	19	31	31	41	13	28	5	9	18	34	0	0	9	16	34	10	14	9	11	1	459
Bihar	110	18	54	34	4	0	47	42	18	34	30	26	70	14	63	16	14	20	42	3	0	4	12	37	7	3	7	0	624	
Bistrita-Neand	81	43	44	33	12	5	11	71	10	69	32	31	60	38	63	10	16	31	78	17	0	5	49	74	20	14	36	26	0	922
Brasov	9	3	2	4	1	0	0	7	4	7	5	3	7	6	8	0	1	4	6	0	0	3	5	6	0	2	3	3	0	90
Cluj	126	60	79	69	9	0	16	120	13	108	93	74	109	92	107	4	15	72	117	10	0	38	92	110	26	21	58	36	0	1548
Covasna	31	12	4	16	10	0	15	18	30	22	23	25	30	27	29	30	13	26	15	16	0	12	20	22	24	8	13	14	0	484
Harghita	45	17	43	43	37	0	1	45	0	40	44	15	43	44	41	5	1	45	42	0	15	15	27	3	20	12	44	0	643	
Hunedoara	112	42	31	2	10	0	6	71	2	55	46	26	58	49	66	4	3	26	54	14	1	18	52	47	10	13	23	22	24	785
Maramures	62	7	13	14	5	5	0	52	9	12	9	21	26	7	9	1	3	7	23	6	0	1	6	17	2	2	4	5	0	257
Mures	89	41	49	38	7	6	69	53	39	78	57	76	65	52	79	3	10	72	79	8	0	0	81	54	17	56	26	15	0	1131
Satu-Mare	88	3	44	43	0	0	45	10	25	53	49	32	22	5	27	32	3	41	55	4	0	0	1	24	15	9	3	1	0	545
Solof	110	87	3	69	1	0	11	94	0	85	86	75	95	76	94	1	13	56	94	0	0	10	82	80	5	19	25	11	0	1182
Sibiu	54	13	14	13	13	0	2	23	2	22	10	8	26	20	16	10	19	15	16	9	0	9	14	12	6	8	11	14	3	328
Total	1046	392	449	431	127	16	247	675	143	652	537	477	678	487	662	131	120	418	705	143	1	162	486	588	172	212	249	238	29	9616