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Original scientific paper

MARJAN NIKETIĆ

***CERASTIUM NEOSCARDICUM*, A NEW SPECIES OF *SER. ALPINA*  
FROM MT SHAR-PLANINA, SERBIA**

Natural History Museum, Belgrade

Niketić, M. (1992-1993): *Cerastium neoscardicum*, a new species of *Ser. Alpina* from Mt Shar-planina, Serbia. – Glasnik Instituta za botaniku i botaničke bašte Univerziteta u Beogradu, Tom XXVI-XXVII, 63 - 70.

*Cerastium neoscardicum* Niketić is described and illustrated from serpentine high-mountain region of Shar-planina mountain (S.W. Serbia: Kosovo). This new species is closely related to *C. alpinum* and *C. decalvans* Schlosser & Vuk.

Key words: genus *Cerastium*, Serbian flora, Mt Shar-planina, new species, *Cerastium neoscardicum*.

Ključne reči: rod *Cerastium*, flora Srbije, Šar-planina, nova vrsta, *Cerastium neoscardicum*.

INTRODUCTION

While studying the flora of the Mt Shar-planina mountain (S.W. Serbia: Kosovo), we encountered an isolated population of the genus *Cerastium* L. (*Ser. Alpina* Borza), occurring on the serpentine grounds. The comparison of the collected specimens with the herbarium material from the extant collections resulted in one species new for the science.

## DESCRIPTION

***Cerastium neoscardicum* Niketić, sp. nova**E subsectione *Cerastium* serie *Alpina* Borza.

I c.: Fig. 1a, Fig. 3(a-c), Fig. 4(a-c)

**Typus:** Flora serbica: Mt Šar-planina (Kodža Balkan: Ostrovica) apud urbem Prizren; 1400-2090 m; in rupestribus serpentinicis, ad Pinetum heldreichii, leg. M. Niketić & N. Stevanović 7.8.1987. (Holotypus: BEO; Isotypi: B, BD, C, LJU, SO).

**Diagnosis:** Laxe vel subdense caespitosum, caulibus infracto-ascendentibus 10-25(35) cm altis, inferne saepe obscure sublignosis, noduloso incrassatis, parum radicosis, cum surculis sterilibus evolutis. Caules floriferi inferne sparse, superne subdense vel dense villosa-tomentosi. In axillis foliorum infimorum turiones steriles saepe evoluti. Folia caulina elliptico-lanceolata vel lanceolata, etiam obovato-lanceolata, raro inferna lineari-lanceolata, 1-2(3,5) cm longa, plerumque acuta, interdum unilateralia et falcata, viridia, ubique sparse vel subdense villosa ad villosa-tomentosa, superficies folii etiam nitide glanduliformi lepidota. Folia surculorum sterilium latiora, juvenilia cano-viridia, villosa ad villosa-lanata, margine barbulata, pilis mollibus 25-40  $\mu\text{m}$  latis obsita. Inflorescentia (1)3-6(15)-flora; rami inflorescentiae post anthesin saepe basi refracti. Bracteae omnes pellucido-scarioso-marginatae, interdum infimae herbaceae. Pedunculi dense crispato ad tomentoso-hirsuti, pilis mollibus et pilis patentibus, interdum etiam fastigiato-deflexo-subulatis obsiti; post anthesin saepe basi refracti, apicem versus paene recti. Sepala ovato-oblonga vel ovato-lanceolata, 7-8(9) mm longa, acuta, dense hirsuta cum pilis subulatis fastigiato-deflexis; pellucido-scarioso-marginata, post anthesin saepe intense contracta. Petala calyce fero duplo longiora. Capsula paene recta, calyce vix vel duplo longiora. Semina 1,3-1,8 mm longa, scabro-tuberculata. Floret a fine Julii in Augustum.

Differt ab *C. alpino* et *C. lanato*, caulibus basi robustioribus et crassioribus, superne tomentosis, surculis sterilibus longioribus, turionibus sterilibus frequentioribus, foliis angustioribus, inflorescentia ampliore, bracteis infimis plerumque scarioso-marginatis, pedunculis crispato ad tomentoso-hirsutis pilis mollibus obsitis, etiam seminibus majoribus.

A *C. decalvanti* distinctum turionibus sterilibus paucis, bracteis infimis interdum herbaceis, ramulis inflorescentiae sicut pedunculis post anthesin saepe basi refractis, pedunculis crispato ad tomentoso-hirsutis pilis patentibus obsitis, calyce tantum cum pilis hirsutis, ab subspecie *decalvans* etiam foliis juvenilibus barbulatis.

A *C. transilvanico* diversum habitu robustiore, caulibus circiter duplo crassioribus non superne refractis, surculis sterilibus sicut turionibus pluribus, indumento densiore, foliis juvenilibus cano-viridibus, pedunculis crispato ad tomentoso-hirsutis non crispato-hirsutis.

**Etymologia:** Šar-planina = Mt Scardus [non *C. scardicum* T. Georgieff ex Soška in Glasn. Skopsk. Naučn. Društva 18: 233 (1938)].

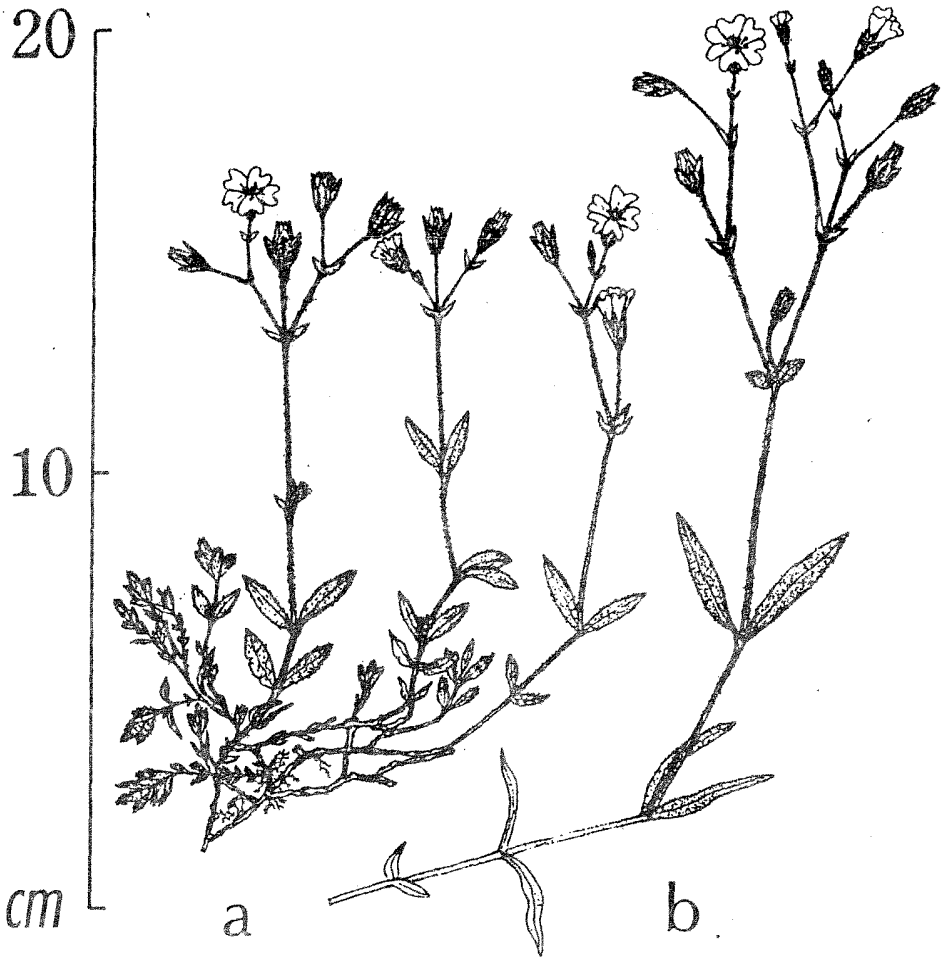


Fig. 1. - Morphological variability of *Cerastium neoscardicum* Niketić: a - habitus, b - flower stem of *Cerastium neoscardicum* Niketić f. *adenotrichum* Niketić

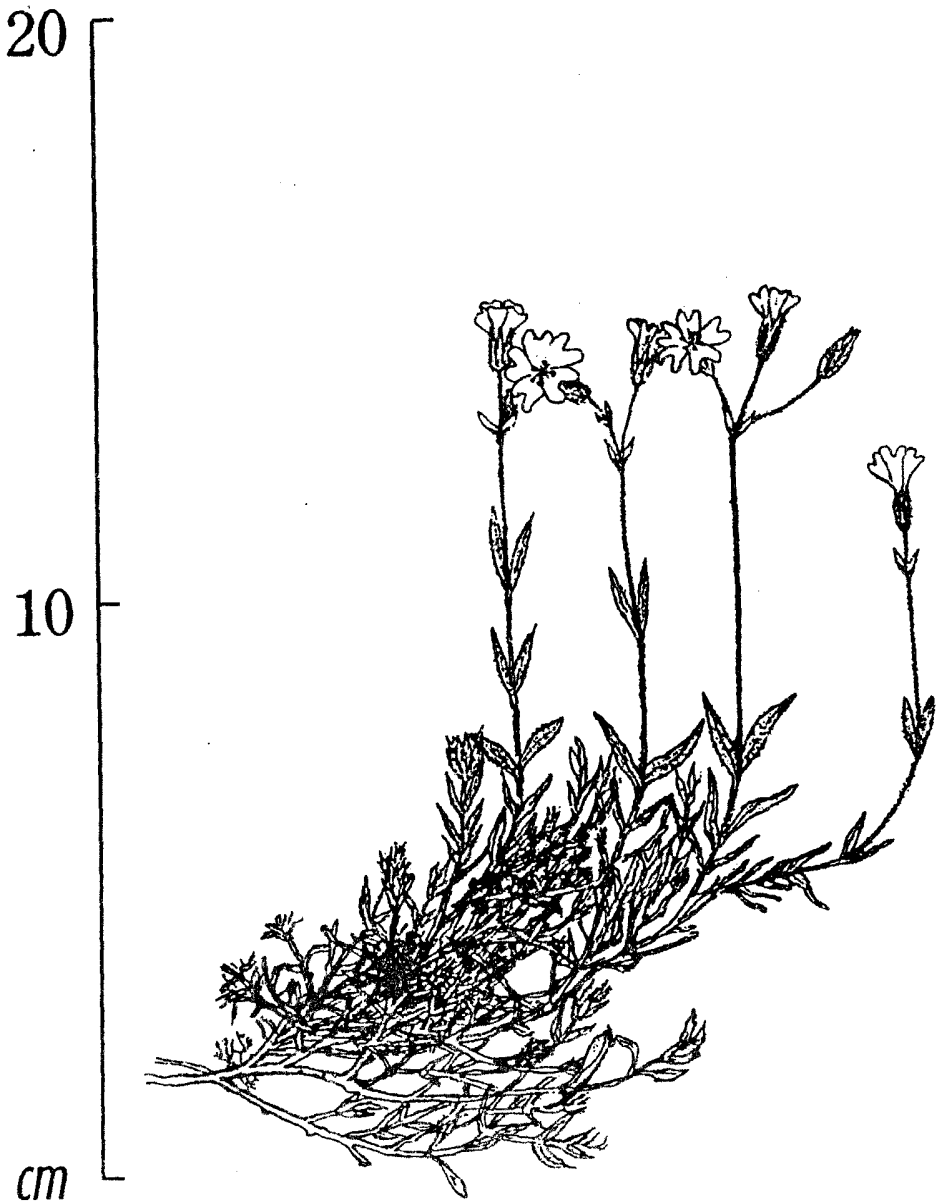


Fig. 2. – Habitus of *Cerastium neoscardicum* Niketić f. *glandulosum* Niketić

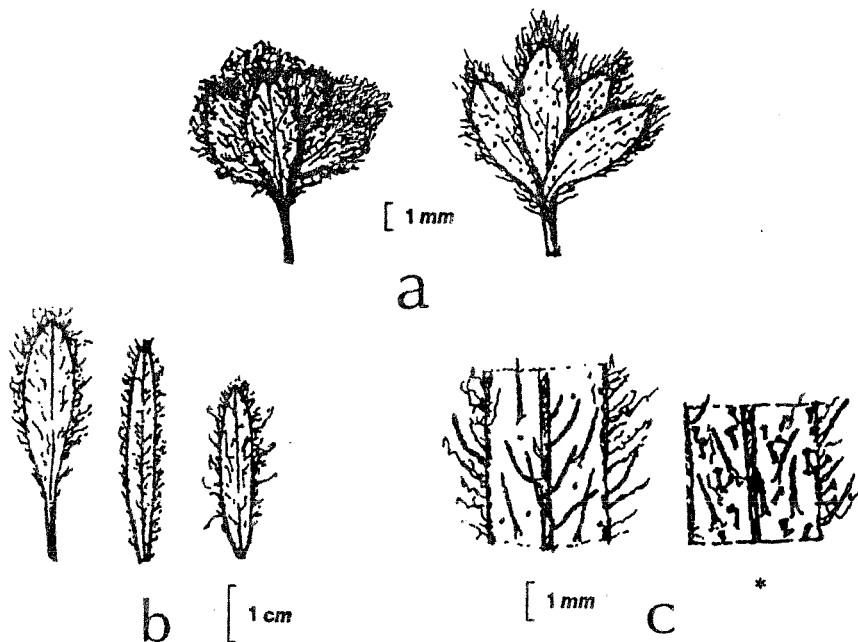


Fig. 3. – Morphological variability of *Cerastium neoscardicum* Niketić: a – young leaves, b – leaves, c – part of leaf – \**Cerastium neoscardicum* Niketić f. *adenotrichum* Niketić

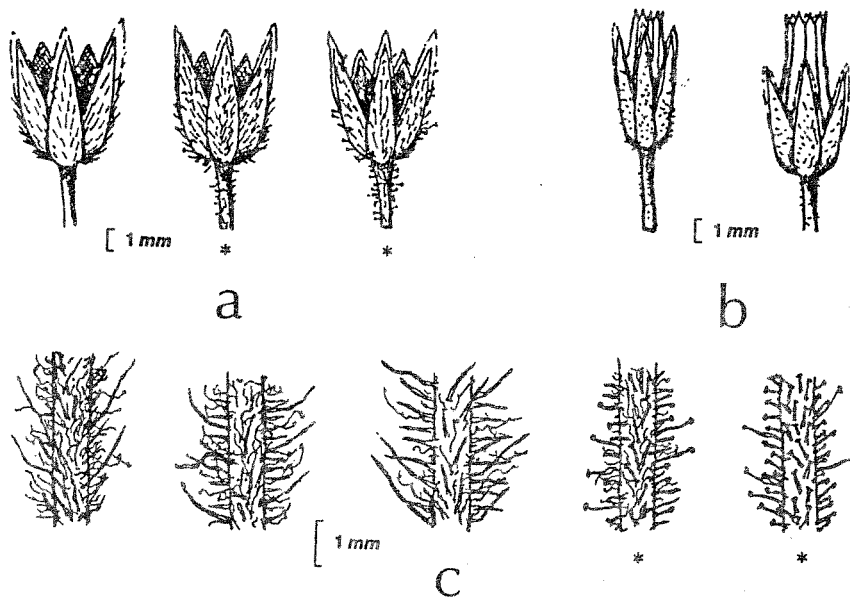


Fig. 4. – Morphological variability of *Cerastium neoscardicum* Niketić: a – sepals, b – capsules, c – part of peduncle – \**Cerastium neoscardicum* Niketić f. *glandulosum* Niketić

## Variabilitas:

f. *adenotrichum* Niketić, f. *nova* - 1 c.: Fig. 3c. - Typus: Flora serbica: Mt Šar-planina (Kodža Balkan: Ostrovica) apud urbem Prizren; 1400-2090 m; in rupestribus serpentinicis, ad Pinetum heldreichii, leg. M. Niketić & N. Stevanović 7.8.1987. (Holotypus: BEO). - Folia glanduloso-villosa ad glanduloso-villoso-tomentosa. Sepala et bracteae, saepe pedunculi et rami inflorescentiae glanduloso-pilosi.

f. *glandulosum* Niketić, f. *nova* - 1 c.: Fig. 1b, Fig. 2, Fig. 4a, Fig. 4c. - Typus: Flora serbica: Mt Šar-planina (Kodža Balkan: Ostrovica) apud urbem Prizren; 1400-2090 m, in rupestribus serpentinicis, ad Pinetum heldreichii, leg. M. Niketić & N. Stevanović 7.8.1987. (Holotypus: BEO). - Sepala et bracteae, saepe pedunculi et rami inflorescentiae glanduloso-pilosi.

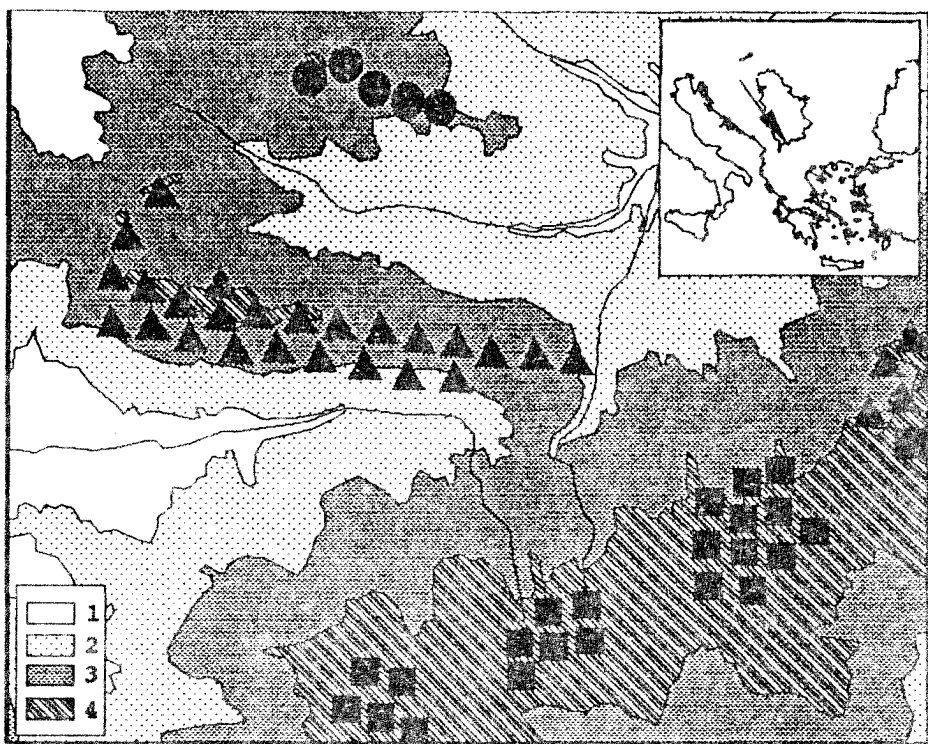
f. *neoscardicum*

Fig. 5. - Distribution of Some Species of Ser. *Alpina* in North-Eastern Part of Shar-planina Mountain: circle - *Cerastium neoscardicum* Niketić, triangle - *Cerastium decalvans* Schlosser & Vuk., square - *Cerastium alpinum* L.; altitude: 1 - < 1000 m 2 - 1000-1400 m, 3 - 1400-2000 m, 4 - > 2000 m

## DISCUSSION

*C. neoscardicum* morphology represents a transition from *C. alpinum* L. to *C. decalvans* Schlosser & Vuk. As both of the mentioned species can be found in the broader Mt Shar-planina region (Fig. 5), *C. neoscardicum* is most probably of a hybrid origin. The specific habitat conditions - the serpentine high-mountain geological

substratum, somewhat lower altitude than that of *C. alpinum*, palebark pine from Heldreich community – have induced have caused a complete independence of the *C. neoscardicum* population. Therefore it would be plausible to give this taxon a hybridogenous species status.

This standpoint is supported by the existence of an independent form with glandular-pubescent leaves, *C. neoscardicum* f. *adenotrichum*. In *C. alpinum*,<sup>1</sup> such a form has not been recorded so far, while some glandular-pubescent forms of *C. decalvans* have been found in an area limited to the central Serbia, Former Yugoslav Republic of Macedonia and Greece, and then only at lower altitudes.

It is interesting to note that a record of the considerable variability of the *C. alpinum* species (*C. alpinum* var. *nudipes* Fenzl ex Griseb.), together with its three forms – „Jusus 1 pumilus, uniflorus (alpinus)”, „Jusus 2 cyma pauciflora, bracteis latius scariosus”, „Jusus 3 cyma multiflora, bracteis herbaceis” – growing on the limestone ground of the Kobilica peak, exists in the first paper ever published on the flora of the Shar-planina mountain (Grisebach, 1843). On basis of these diagnoses and the materials collected by Doerfler on the limestone grounds of the Ljuboten peak, Wettstein (1882) concludes that the forementioned locality hosts the transitory forms from *C. alpinum* to *C. arvense* L. Since, in his paper, Griesebach wrongly identifies *C. decalvans* from the same locality as *C. arvense* var. *alpicotum* Fenzl (Grisebach, 1843), Wettstein's idea of *C. arvense* remains unclear. Essentially, Wettstein (1892) records *C. decalvans* (under the name of *C. lanigerum* Clem.) on the Kobilica peak only, disregarding Griesebach's record of it on the Ljuboten peak; in his paper there is also no recorded of *C. arvense* on any locality of the Shar-planina mountain.

Unfortunately, it was impossible for us to see Doerfler's materials, but having examined the extensive herbarium materials, we came to the following conclusion: The region of the Shar-planina mountain is one of the most important foci of the Ser. *Alpina*, represented by the greatest number of its species: *C. alpinum*, *C. decalvans*, *C. lanatum* Lam. and *C. neoscardicum*. Furthermore, it is the only place of introgression between the *C. alpinum* and *C. decalvans* species. Generally speaking, the morphological differences between these two species, when growing on limestone and silicate grounds, are much less marked than in the same species originating from the any other localities. Within each species, there are forms characteristic of their respective species, slightly reminiscent of the other species. The spontaneous hybrids have not been found. The serpentine are home to *C. neoscardicum* only, which is most probably of a hybrid origin. As for the Ser. *Cerastium* (*Arvensia*), its only species recorded with any certainty on the Shar-planina mountain is *C. banaticum* (Rochel) Heuffel.

#### ACKNOWLEDGEMENTS

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<sup>1</sup> According to the current classifications (Greuter et al., 1984; Jalas, 1993) this form could be brought to connection with the glandular-pubescent *C. hekuravense* Jáv. of Albania. However, this taxon has been returned from Ser. *Alpina* to Ser. *Latifoliae* as an infraspecific form of *C. dinaricum* G. Beck & Szysz. (Niketić, 1995).

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## Re z i m e

MARJAN NIKETIĆ

***CERASTIUM NEOSCARDICUM*, NOVA VRSTA IZ SER. *ALPINA* SA PODRUČJA ŠAR-PLANINE, SRBIJA**

Prirodnjački muzej u Beogradu

Tokom florističkih istraživanja flore Šar-planine (Kodža Balkan: Ostrovica) naišli smo na jednu izolovanu populaciju iz roda *Cerastium* L. (Ser. *Alpina* Borza), koja se javlja na serpentinitskoj geološkoj podlozi. Nakon komparacije sakupljenih primeraka sa postojećim materijalom iz herbarskih zbirki zaključili smo da se radi o novoj vrsti za nauku.

*C. neoscardicum* po svojoj morfoloiji čini prelaz od *C. alpinum* L. ka *C. decalvans* Schlosser & Vuk. Kako na širem području Šar-planine rastu obe pomenute vrste, *C. neoscardicum* je najverovatnije hibridnog porekla. Specifični stanišni uslovi (serpentinitski visokoplaninski geološki supstrat, nešto manja nadmorska visina od one na kojoj se javlja *C. alpinum*, zajednica munike) usloveli su potpunu samostalnost populacije *C. neoscardicum*. Zbog toga je ovom taksonu ispravno dodeliti status hibridogene vrste.

U ranijim florističkim radovima sa područja Šar-planine (Grisebach, 1843; Wettstein, 1892) pominje se znatna varijabilnost vrste *C. alpinum*, kao i prelazni oblici ka drugim vrstama. Naša istraživanja populacija *C. alpinum* i *C. decalvans*, na silikatnim i krečnjačkim terenima Šar-planine, pokazala su da se kod obe vrste javljaju oblici koji striktno pripadaju jednoj, a samo po nekim karakteristikama podsećaju na drugu vrstu. Spontani hibridi nisu primećeni. Na serpentinitskim terenima raste isključivo *C. neoscardicum*, koji je najverovatnije hibridnog porekla.