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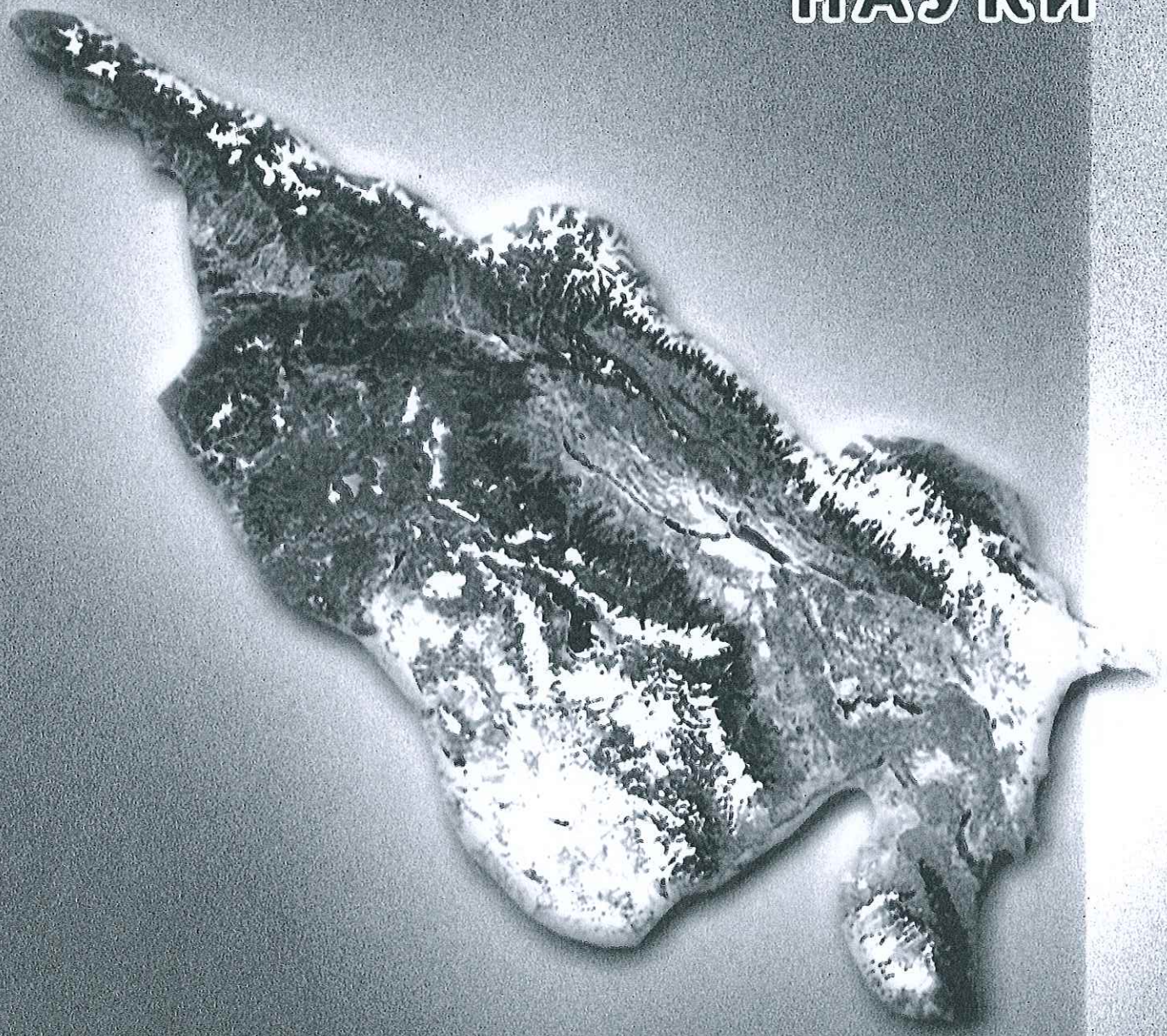

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Cover: Satellite Photo of the South Caucasus Countries by Company VISIBLE EARTH

VACCINIUM MYRTILLUS VAR. *ARTVINENSE* - A NEW TAXON FOR THE FLORA OF TURKEY

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Vaccinium myrtillus L. var. *artvinense* Akpulat & Eminagaoglu var. nova (Ericaceae) from Artvin district is described and illustrated. Diagnostic characters, a description and taxonomic comments on the subspecies are given and compared with the closely related *V. myrtillus*. The geographical distribution of the new variety and related species are given. IUCN threatened category and observations on the population are noted.

INTRODUCTION

The *Ericaceae* (the heath family) consists of about 110 genera and 4000 species. Abundant and widespread throughout the temperate regions of the Northern and Southern hemispheres, it is a conspicuous element in the subarctic circumpolar vegetation and in subtropical and tropical mountains. The genus *Vaccinium* is most abundant as an epiphyte in the tropics of the New World, Malaysia, and southeastern Asia. There are about 150 to 450 species (the number varies by authority) of deciduous or evergreen shrubs (rarely trees or vines) in *Vaccinium*. The majority of species occur eastern Asia & Papua New Guinea [1-3].

Many species of *Vaccinium* are rhizomatous, thus forming multi-stemmed, rounded to upright shrubs or small trees ranging in height from 30 to 50 cm. Cranberry forms a dense evergreen ground cover about 15 cm in height. Several species of *Vaccinium* are valued for their edible fruits. Historically, Native Americans consumed blueberries fresh or dried them for winter consumption. In addition, they steeped the leaves, flowers, and rhizomes in hot water and used the tea to treat colic in infants, to induce labor, and as a diuretic [1,3].

The currently accepted scientific name of dwarf bilberry is *Vaccinium myrtillus* L. [4]. It is placed within the section *Myrtillus* [3,5,6].

The *Vaccinium* genus is taxonomically complex. Hybridization and polyploidy make delineation of species difficult [6, 7].

According to recent studies on the Turkish *Vaccinium*, this genus is represented by 4 taxa that are *V. vitis-idaea, V. uliginosum, V. myrtillus, V. arctostaphylos* in Turkey [8].

OBJECTIVES AND METHODS

The new taxon was collected during the field studies of the project titled "The Phytosociological and Ecological Research on the Vegetation Structure of Sahara-Karagol National Park and its Nearest Environs" submitted by TUBITAK from Savsat, around Artvin, North-East Anatolia, Turkey, in the year of 2002 and deposited in CUFH. (Figure 1). This new variety was morphologically compared with related species, *V. myrtillus*. Authorities for all cited plant names are given according to Authors of Plant Names [9].

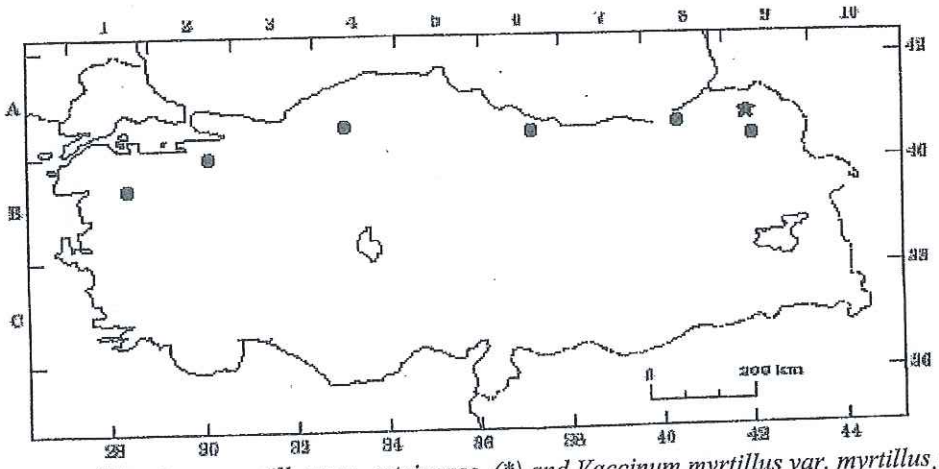

Fig. 1. *Distribution of Vaccinum myrtillus var. artvinense (*) and Vaccinum myrtillus var. myrtillus (•) in Turkey*

RESULTS AND ANALYSIS

Taxonomical Treatment

Vaccinium myrtillus L. var. artvinense Akpulat & Eminagaoglu, var. nova (Fig. 2)

Type: Turkey. A9 Artvin, Savsat, Karagol-Sahara National Park, subalpine vegetation, 15. vii. 2000, 2100 m, 41 13 17 N- 42 29 18 E, ÖE 2279 (holo. CUFH; iso ISTE, ACUH).

A9 Ardahan, Posof, Alabalık Village, 2400 m,13. viii. 2006, 41 22 46 N- 42 37 19 E, ÖE 5091; A8 Artvin, Merkez, Vezirköy Yaylası, 2400 m, 10.07.2007, 41 17 42 N- 41 56 15 E, ÖE 7379 (ACUH).

Diagnosis : Afinis V. myrtillus L. Sed ab foliis longis 15-35 x 10-20 mm (non 19-27 x 7-11 mm), fructus longus 3-4 mm (non 7-9 mm), differt.

Description: Deciduous shrublet to 45 cm; stem angled, leaves shortly petiolate, lamina ovate to elliptic, glandular hairs beneath, 1.5-3.5 x 1-2 cm, margin serrulate with reddish glandular hair. Flower single, corolla pale greenish-pink, or greenish-white, urceolate, 3-4, 5 x 5 mm. Fruit dark purple, glaucous, 3-4 mm. Fl-june, Fr-september.

Flowering and fruiting: June-September (subalpine vegetation, Birch forest, with *Betula pendula* Roth, *Rhododendron caucasicum* Pall. and *Juniperus communis* L. var. *saxatilis* Pall., 1800-2400 m a.s.l.).

Distribution: Northeastern Anatolia (Artvin), Euro-Siberian element.

Conservation Status

The new subspecies is an endemic taxon known from three separate localities. Extent of occurrence is about 20.000 km^2, area of occupancy about 2000 km^2; therefore, it should be considered as VU [10].

Ecology

This new variety grows on high forest and subalpine zone, characteristic plants such as *Vaccinium uliginosum* L., *Rhododendron caucasicum* Pall., *Aquilegia olympica* Boiss., *Rubus caucasicus* Focke, *Veronica gentianoides* Vahl, *Solidago virgaurea* L. subsp. *alpestris* (Waldst. & Kit.) Gaudin, *Oxalis acetosella* L., *Stachys macrantha* (C.Koch) Stearn, *Daphne glomerata* Lam., *Sedum tenellum* M.Bieb, *S. spurium* M.Bieb, *Campanula tridentata* Schreber, *C. aucheri* A.DC., *Poa longifolia* Trin., *Pedicularis nordmanniana* Bunge, *Thymus praecox* Opiz subsp. *grossheimii* (Ronniger) Jalas var. *grossheimii*, *Rumex tuberosus* L. subsp. *horizontalis* (C.Koch) Rech., *Erigeron caucasicus* Stev. subsp. *caucasicus*.

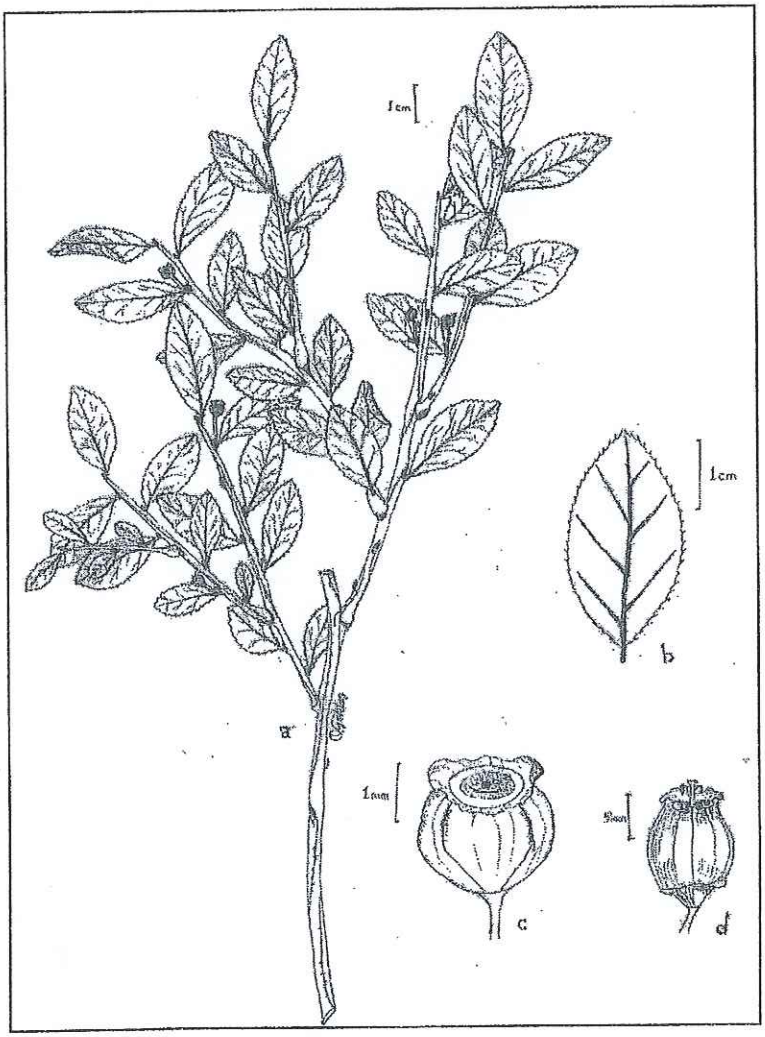

Fig. 2. *Vaccinum myrtillus var. artvinense (from type).-a: Habit.-b: fruit.-c: flowers.-d: leaf*

Vaccinum myrtillus L. var. *artvinense* Akpulat & Eminagaoglu is related to *V. myrtillus* L. Some of the taxonomic characters that distinguish *V. myrtillus* L. var. *artvinense* from the related species of *Vaccinum* are given in table 1.

Table. *Diagnostic characters of Vaccinum myrtillus var. artvinense and V. myrtillus*

Characters	*V. myrtillus* var. *artvinense*	*V. myrtillus* var. *myrtillus*
Leaf size (mm)	15-35 x 10-20	19-27 x 7-11
Fruit diameter (mm)	3-4	7-9
Fruit colurs	Dark purple, glaucous	Black, with a blue bloom

This new subspecies is clearly different from *Vaccinum myrtillus* in that it has smaller fruit 3-4 mm (not 7-9), larger leave size 15-35 x 10-20 mm (not 19-27 x 7-11 mm) and leaf apices obtuse (not acute).

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