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RANUNCULUS TRICHOPHYLLUS CHAIX : A NEW RECORD FOR THE FLORA OF NAHCEVAN AND CAUCASIA REGION

VAGIF ATAMOV* AND MURAD MUSAYEV[1]

Recep Tayyip Erdogan University, Faculty of Science and Letters, Department of Biology, 53100, Rize-Turkey

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Abstract

Ranunculus trichophyllus Chaix (Ranunculaceae), is reported here for the first time for the Flora of Azerbaijan. The specimens were collected from the Batabat Sea in teritorie of Nahchıvan Otonom Republic of Azerbaijan.

One of the reasons of richness of flora and vegetation of Azerbaijan is the diversity of ecosystem originated from different ecological environments. One of these ecosystems is the wetland asys of marshy areas. The water-marshy ecosystems are distributed in all over the world (Kats 1961, Aliyev 1969, Grandstein and Smittenberg 1977, Katanskaya 1981, Seçmen, Leblebici 1984, 1996, 1997; Beçet, Altan 1994; Çakan, Düzenli 1993; Çivelek, Çetin 1993; Golub, Losev and Mirkin 1991). Seçmen, Leblebici (1996) indicated that the wetlands are the systems which have the highest level of annual basic production capacity.

Although the water-marshy ecosystems of Azerbaijan spread out largely on flat land areas, they differ in many raspects. Saltwater and freshwater wetlands are the most evident reasons. Another important difference is the topographical differences. In addition to the plain land areas flora and vegetation, phytosociological structure of the mountainous regions shows significant differences.

Memmedov (2011) indicated that the factors like ecological conditions of the environment, water composition, chemical composition, salinity, altitude, and temperature plays an important role on lakes of Azerbaijan's Kür-Araz lowland.

The flora and vegetation of Azerbaijan were investigated by a number of botanists (Grosshaya 1936, 1948, Prilipko 1970, Aliyev 1969, Babayev 1974, Efendiyeva 1998, Hacıyev 1970, Hacıyev, Mayılov, Atamov at all. 1991, Atamov 2008; Talıbov, İbrahimov 2008, İbrahimov 2008, Musayev 2010) in different regions and times.

One of the regions of water-marshy vegetation is prevalent is Lenkeran lowland which is located in the south-east of Azerbaijan. There are many lakes, ponds, marshes, and streams in this flat land areas of this region (Memmedov 2011). This area which is known as the migration path of large number of birds was investigated previously by Grossheym (1936, 1948), and later in more detail by Aliyev (1969). Later on this vegetation was reinvestigated by F.Babayev (1974), Efendiyeva (1989) and, recently Musayev (2010). Babayev (1974) studied mountain areas of Little Caucasia, Efendiyeva (1989) Absheron peninsula and Musayev (2010) the plain land areas of Kür-Araz. According to the results of these studies, we find the richness of the flora is different, a large number of plant species were added as new records to the flora in water-marshy ecosystems in different parts of Nahchivan Autonomous Republic of Azerbaijan (Talıbov and Ibrahimov 2008).

*Autor for correspondance: <vhatemov@yahoo.com>. [1]Institute of Botany, Azerbaijan NA of Science, Baku-Azerbaijan.

In July and August of 2012, in the mountainous regions of Nahichevan, especially in lakes and around its plains and mountainous regions of Ordubad and Shahbuz a large number of plants were collected by us. As a part of floristic studies, a large number of water and marsh plants were collected from Nakhchivan. From these collected and identified plant specimes we determined that one of these plant specimes is *Ranunculus trichophyllus* Chaix (Fig. 1) and it is a new record for Nakhchivan and Caucasicus. In the Batabat lake located in Batabat plateau of Nahchivan's Shahbuz region, a great number of water-marshy plants were found (Fig.1). However, Batabat lake located at 1500 m above the sea level has fresh water, *Potametum natanso-perfoliati* association is characteristic for this lake and *Polygonum amphibium* L. var. *natans* Leyss taxa is recognised as rare species (Fig. 2). Other species *Potomageton pectinatus* L., *Alisma plantago-aquatica*, *Lithrum salicaria*, *Potomogeton densus* L., *Ceratophpyllum submersum* L., *Potamogeton natans*, *Potamogeton crispus* L., *Potamogeton perfoliatus* L., and *Polygonum amphibium* L. var. *natans* Leyss etc. are also found in this lake.

Ranunculus trichophyllus Chaix was found in association of these species (Fig. 1). This species, which was collected from Balabat lake located at 1500 m above the sea level in Nahcevan's Balabat pleteau (Azerbaijan), was defined as a new record for Caucasia.

Ranunculus trichophyllus Chaix was found during weed surveys in autumn crops in Batabat mountain sea of Nahchevan Otonom Repablic of Azerbaijan of Caucasian region.

This plant was previously reported as not avaible in Caucasia Flora (Karyagin 1952, Grossheym 1950, Ovchinnikov 1937). It is known that a large number of localities are present in Turkey which is one of the neigbouring countries to Caucasia (Cook 1965, Donner and Çolak 2007). This species occurs in Kars vilayet of Turkey according to Flora of Turkey and as Kars is the closest area it should have migrated from Turkey.

The specimens of this species are kept in Herbarium of the Institute of Botany, Azerbaijan NA of Science.

Ranunculaceae

Ranunculus trichophyllus Chaix in Vill., Hist. Pl. Dauphinė, 1: 335 (1786).

Type: [Switzerland] In aqua stagnante sub Kirchenfeld, 1162. Collector unknown, but in the herbarium of Haller fil. (G!).

Syn: R. paucistamineus Tausch in Flora 17: 525 (1834) pp. et sensu Hayek, Prodr. Fl. Balc. **1**: 347 (1927), Rech., Fl. Aeg. 194 (1943); R. drouetii F. Schultz, Exsicc. Fl. Gall. et Germ. No. 404 (1841); Batrachium trichophyllum (Chaix) van den Bossche, Prodr. Fl. Bot. 17 (1850)! R. aquatilis L. var. submersus sensu Boiss., Fl. Or. 1: 23 (1867), Post (ed. Dinsmore), Fl. Syria **1**: 8 (1932) non Gren. & Godr. R. aquatilis subsp. paucistamineus (Tausch) Holmboe, Veg. Cyprus 80 (1902); R. aquatilis subsp. heleophilus (Arv.-Touv.) Rikli in Schinz & Keller, Fl. Schweiz, ed. 2, **2**: 80 (1905), sensu Meikle m Notes R.B.G. Edinb. 33: 19 (1959), pp. Ic.: Darwiniana 9: 449 (1951).(Cook 1965). (Fig. 1).

A scarce plant of ditches and the margins of slow-moving water. Flower diameter c 7 - 12 mm. Flowers like buttercups but white with yellow centres and the petals well-separated. Leaves divided into threadlike segments. Petals nearly touching or even overlapping. The first two divisions of the leaves are usually into threes. Submerged capillary leaves spreading, rigid, semi-rigid or collapsing when removed from water, usually sessile in summer and petiolate in winter. Peduncle in fruit 2 - 5 cm. Sepals 2.5 - 3.5 mm. Petals obovate, not contiguous at early anthesis, 3 - 5.5 mm, nectar pit lunate. Torus hairy, not elongating in fruit. Carpeis 1.5 - 2 mm, elongated with convex margin, usually pubescent when immature (hairs occasionally caducous), 15 - 35. Fl. 3 - 7. Alt. 80 - 2200 m.

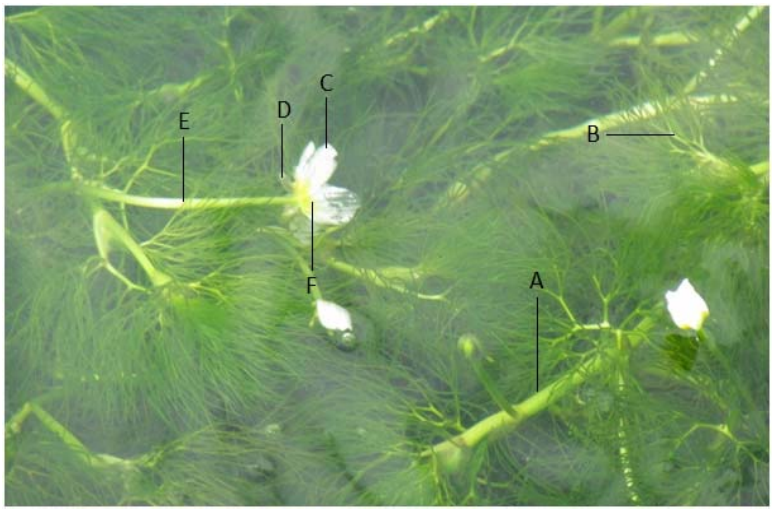

Fig. 1. General view of *Ranunculus trichophyllus* Chaix. A. Habitus, B. Leaves, C. Petals, D. Sepals, E. Peduncle, F. Flower.

Widespread but local: Batabat mountain sea in Nahcivan, 1500 m, 20.10.2004, MM 1025, Minor Caucasian

Conservation status: Critically endangered [CR B2b (ii)c, (iii)], (IUCN Survival Commission, 2001).

N. Temperate Regions; S.W. Australia, Tasmania and New Zealand (Cook C.D.K. (1965).

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