

A NEW SPECIES OF ASPARAGUS L. (ASPARAGACEAE) FROM IRAN

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Asparagus touranensis is described as a new species from Iran. This taxon has been collected from Semnan, Khorasan, Khuzestan and Hormozgan provinces of Iran. It is related to *Asparagus capitatus* subsp. *gracilis* (Royle) Browicz in cladode shape, habit and spiny leaf on the base of stem, but differs from it in having longer pedicel, longer cladode, having articulation above the middle of pedicel and rate of pedicel to perianth. *Asparagus touranensis* is distributed to NW, C. and South of Iran. Characteristics, exact localities, habitat, geographical distribution and the last state of nomenclature are explained.

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Key words. Asparagaceae, *Asparagus*, Hormozgan, Khorasan, Iran, new species, Semnan.

گونه جدیدی از جنس مارچوبه (*Asparagus*) در ایران

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مصطفی اسدی، استاد پژوهش مؤسسه تحقیقات جنگلها و مراتع کشور.

گونه *Asparagus touranensis* متعلق به زیر جنس *Asparagopsis* بوده و قرابت و ارتباط آن با زیر گونه *Asparagus capitatus* subsp. *gracilis* در برگ های خاری قاعده ساقه، شکل کلادود و فرم رویشی است. تفاوت این دو تاکسون در محل مفصل دم گل، اندازه کلادود، اندازه دم گل و نسبت دم گل به پوشش گل است. این تاکسون به عنوان گونه‌ای جدید از ایران گزارش می گردد. این گونه از مناطق مختلف ایران شامل سمنان، خراسان، خوزستان و هرمزگان جمع آوری شده است. ویژگیها، محل دقیق جمع‌آوری، رویشگاه، پراکنش جغرافیایی و آخرین وضعیت نامگذاری گونه توضیح داده می‌شود.

INTRODUCTION

The genus *Asparagus* L. is widely distributed throughout the world and has been divided into two subgenera, subgenus *Asparagus* and subgenus *Asparagopsis* (Willd.) Baker. It comprises some 120 species, of which 10 occur in Iran (Baker 1875; Iljin 1935, Parsa 1949. Wendelbo 1964 and 1985; Davis 1984; Browicz 1990 and Hamdi & Assadi 2009) (Browicz 1990). While preparing an account of *Asparagaceae* Juss. Flora of Iran, some specimens seemed to be interesting. In the beginning, it seemed they should belong to *Asparagus capitatus* subsp. *gracilis* (Royle) Browicz from the sect. *Asparagopsis* occurring in Afghanistan and other adjacent countries but further studies showed that they have considerable diagnostic characters to be described as a new species. The aim of this paper is to describe and illustrate the new species.

MATERIAL AND METHODS

The study on *Asparagus* in Iran is mainly based on plant materials deposited in herbaria TARI and FUMH (acronyms according to Holmgren & Holmgren 1998). Several trips made to different parts of Iran to do field studies and also to collect more materials. Flora Iranica (Browicz 1990) was used as the main reference to identify materials.

RESULTS AND DISCUSSION

New species

***Asparagus touranensis* Hamdi & Assadi, sp. nov.** Fig. 1.

Typus. Iran, Semnan: Touran protected area, 4 km E of Razeh, Chah Plange, near Andar Kuh, 1280 m, Freitag and Mozaffarian 28512 (holotypus TARI).

Other specimens studied. Khuzestan, ca. 40 km to

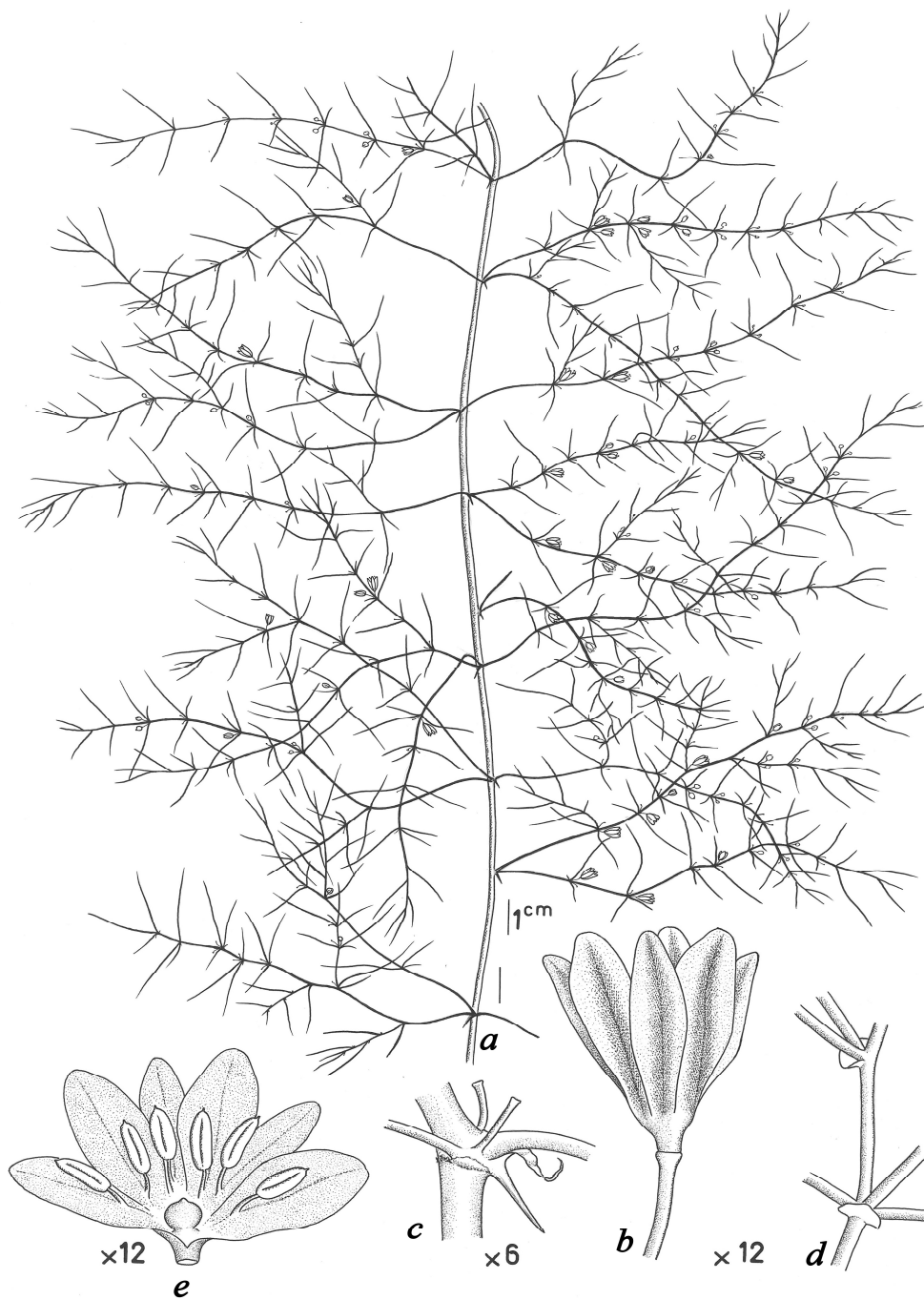


Fig. 1. *Asparagus touranensis* (a) habit; (b) articulated pedicel; (c & d) leaf; (e) flower. Drawn from the holotype specimen.

Table 1. Morphological and micromorphological characteristic features of *Asparagus touranensis* and *As capitatus* subsp. *gracilis*.

Characters	<i>A. touranensis</i>	<i>A. capitatus</i> subsp. <i>gracilis</i>
Cladode shape	filiform	filiform
Cladodes number	2-3	2-) 3-6 (-8)(
Cladode length (mm)	10- 25 (-30)	3-12
Pedicel (mm)	5-7	3-3.5
Pedicel articulation	above the middle	below the middle
Pedicel/perianth	longer	equal
Flower numbers in each branch	1-4	6-10

Ahvaz from Andimeshk Ghaleh Sahar, 50 m, Mozaffarian (62229 TARI). Khorasan, Gonabad, 35 km of Bimargh to Ahangaran, 900 m, Faghihnia and Zangoeei (22983 FUMH); Ghaen, N. W. Ghaen, 12 km Girmonge to Bihoode, 1750 m, Rafeie and Hoseinzadeh (30897 FUMH). Hormozgan, Bandare Abbas, 25 km from Senderk to Minab, 120 m, Mozaffarian, Rastegar and Banihashemi (38119 TARI).

Planta perennis. Caulis 80-120 cm longus. Internodia 4-8 cm. longa. Cladodia 10-25 × 0.2-0.3 mm, 1-3 na fasciculata, filiformia, valde inaequalia. Spina c. 5-6 mm longa, lignosa. Folia squamiformia, membranacea. Pediceli 5-7 mm longi. Stamina 6, 2-3 mm longa; anthera, 1.5-2 mm longa. Bacca 4-5 mm longa.

Perennial herbs with only lower part woody, usually glaucous, glabrous, branched, ascending. Stems 80-120 cm long; internodes 4-8 cm long; between fascicles 10-20 mm. Cladodes in 1-3 fascicles, 10-30 × 0.2-0.3 mm long, acute, unequal, straight. Scale-like leaves spurred, 5-6 mm long; lowers spiny. Pedicles 5-7 mm long, articulated above the middle, longer than the perianth. Perianth 4-5 mm long. Flowers binary, 6-10 on the branches in the axils. Stamens 6, 2-3 mm long; anthers 1.5-2 mm. Berry 4-5 mm long, spherical; berry stalk 1-1.3 mm long. Seed single.

General distribution. *Asparagus touranensis* is distributed to Semnan, Khorasan, Khuzestan and Hormozgan provinces in Iran but *Asparagus capitatus* subsp. *gracilis* as the closest species is a native of Afghanistan, Pakistan (N.W.F. Province, Punjab, Baluchistan) and India (Himachal Pradesh, U.P., Behar, South India).

Systematic position. *Asparagus touranensis* belongs to the *Asparagus* subgen. *Asparagopsis* (Willd.) Baker.

The new species is compared with its closest relative *Asparagus capitatus* subsp. *gracilis* (Royle) Browicz. The two species are similar in the same cladode shape, habit and spiny leaf on the base of stem. But, differs in pedicle length, cladode length, place of pedicel articulation and rate of pedicle to perianth (Fig. 1, Table 1) (Browicz 1990; Iljin 1935 and Wendelbo 1964 & 1985).

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