

The Genus *Acacia s.l.* (Fabaceae) in Yemen

Abdul Wali Al-Khulaidi¹, Sami H. Rabei^{*2} and Abdul Nasser Al-Gifri³

¹Agricultural Research & Extension Authority, Yemen, contracted with the National Center for Vegetation Cover Development & Combating Desertification (NCVC), Saudi Arabia.

² Botany and microbiology Department, Faculty of Science, Damietta University, Damietta, Egypt.

³ Biology Department, Faculty of Science, University of Aden, Yemen.

Received: 13 March 2024 /Accepted: 30 May 2024

*Corresponding author's E-mail: samirabei@du.edu.eg

Abstract

The current study aims to update the list and revise the nomenclature of *Acacia s.l.*, one of the most widespread genera in Yemeni flora. The study was compiled by consulting a number of information sources, including relevant literature and online databases. According to recent molecular phylogenetic studies, *Acacia s.l.* is polyphyletic and the recognition of seven genera is strongly supported. Hence the classical identity of *Acacia* needs to be changed. Therefore, the current position of different *Acacia* taxa presents in Yemen (including six endemics, one near-endemic and four regionally endemics), which was formerly assigned in *Acacia s.l.*, has been transferred to *Acacia s.s.* *Vachellia* and *Senegalia*. This has resulted in six species of *Acacias*, fifteen species with 7 subspecies and 2 varieties in *Vachellia* and six species in *Senegalia*.

Keywords: *Acacia s.s.*, Endemic, Near endemic, *Senegalia*, *Vachellia*, Yemen.

Introduction

Acacia Mill. *s.l.* in its outdated circumscription is the second largest genus in Family Fabaceae (Leguminosae, Mimosoideae) of about 1511 species (Orchard & Meslin, 2003), commonly distributed in tropical, subtropical and warm temperate areas of the world. The majority of species are centered in Australia, many in America and Africa (POWO,2023).

According to Miller & Seigler (2012), the current phylogenetic study of *Acacia s.l.*

provided robust support for the detection of five species. However many studies including the new classification of Miller *et al.* (2017) which is based on the outcome of many morphological characteristics, illustrated that *Acacia s.l.* should at least comprise seven genera namely: *Acacia* Mill. *s.s.* (mostly Australian with 1084 spp.), *Senegalia* Raf. (Tropics and subtropics and include 221 spp.), *Vachellia* Wight & Arn. (known from Asia, Africa, America, and Australia, comprising 164 spp.); *Acaciella* Britton & Rose (native to C & S USA to Columbia with 15 spp.); *Mariosousa* Seigler & Ebinger (native to C America and includes 14

spp.); *Paraseneghalia* Sieglar & Ebigner, (native to S America and comprises 11 spp.) and finally *Racosperma* which was adopted for Australian *Acacia* species (Mabberley, 2008; Maslin et al. 2019). Based on that, numerous studies revised, amended and updated the *Acacia* s.l. nomenclature, including Hassan & Hamdy (2021), Hosni & Shams (2022), and Shams et al. (2023), where they updated the nomenclature of *Acacia* s.l. in Egypt.

The Flora of Yemen has received very limited research coverage, though several botanists visited Yemen, a few of them were published as Forsskål (1775), Schweinfurth (1881-1889), Deflers (1889), and Blatter (1914-1919). However, the mainly up-to-date goes back to Boulos (1988) and Gabali & Al-Gifri (1990) (at southern part of Yemen), and Wood (1997) (at the northern part of Yemen). Currently, the most comprehensive checklist for the flora of the Republic of Yemen was edited by Al-Khulaidi (2013).

The investigation on *Acacia* s.l. in Yemen was started by P. Forsskål, who accompanied the Royal Danish expedition to Arabia Felix in 1761–1763, followed by a few studies that focused on the diversity and distribution of the genus *Acacia* s.l. in Yemen, including Dubaie, & Al-Khulaidi (1990) and Boulos (1995). Moreover, in 2013, Al-Khulaidi created a checklist for the flora of Yemen in which he included all the species of *Acacia* s.l. (28 species including the two subspecies of *A. etbaica*, *A. nilotica* and *A. tortilis*) under the genus *Acacia* Mill. as it was workable all over the world.

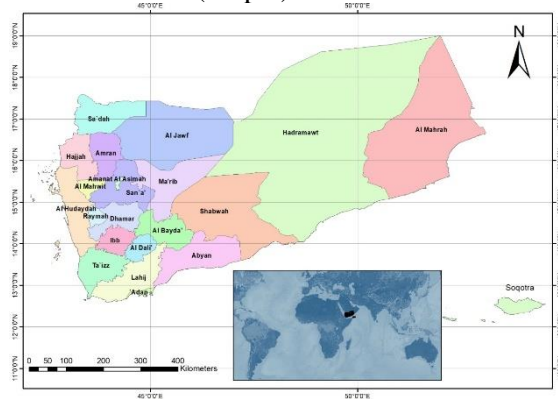
Therefore, this contribution aims to afford an updated list of taxonomic and nomenclatural changes of Genus *Acacia* within the flora of Yemen, to serve as a taxonomical and nomenclatural basis for botanical and biosystematics studies.

Materials and Methods

Study area.

Yemen lies in the southwestern to southern end of the Arabian Peninsula, between latitude 15° 33' 14.06" N and longitude 48° 10' 29.45" E. Bordered by Saudi Arabia from the north, the Red Sea from the west, the Gulf of Aden and the Arabian Sea from south, and Oman from the east. Out of 200 islands, Socotra is Yemen's largest island. Yemen is divided into 20

governorates, the largest of which, Hadramawt, accounts for approximately 37% of the country's total land area. The land area is about 527,970 km², with altitudes ranging from sea level to 3,665 m above sea level at the Mountain of Nabi Shuaib (Map 1).



Map 1. The location and the Governorates of Yemen.

Data collection:

To compile the present list, multiple information sources were examined and combined. Overall, in a list of 31 taxa, we report only the specific and infraspecific taxa that were previously reported by Dubaie & Al-Khulaidi, (1990) and Al-Khulaidi (2013), and are now treated as synonyms.

Taxonomic validation:

The obtained list was subjected to a taxonomic validation process. Taxonomic rank and plant names were verified and validated with international reference databases: Plants of the World Online (POWO, 2023) and the surrounding flora (Chaudhary, 1983, Lock, 1989 and Thulin, 1993).

Results and Discussion:

The nomenclature of different ranks of taxa (genera, species, and intraspecific taxa) was updated and critically checked according to recent studies. The recorded list of Yemeni *Acacia* s.l., taxa is presented along with their updated nomenclature, vernacular names, and their local (some abbreviations were used to illustrate the local distribution of *Acacia* s.l., taxa; J: Jabal, W.: Wadi) and global distribution (some abbreviations were used to illustrate the global distribution of *Acacia* s.l., taxa; E: East,

W.: West, S: South, N: North and C: Center), as follows:

A. *Acacia* Mill., Gard. Dict. Abr. Ed. 4: 25 (1754).

(Type: *A. penninervis* Sieber ex DC.)

Stipular spines are absent or if present, leaves modified into phyllodes. Leaves modified into phyllodes or if bipinnate then with extra floral nectaries. Flowers in spikes or heads, the latter never with an involucre on a peduncle. Flowers without a disc and not on gynophores; plants without prickles.

Acacia auriculiformis A. Cunn. ex Benth. in Hook. London J. Bot. 1: 377 (1842).

Local Distribution: Introduced as an ornamental tree from Tropical Australia, cultivated the municipal gardens in mountainous areas such as Sanaa, Ibb, and Taiz.

Global: SE. Maluku to New Guinea and N. Australia. Introduced into India, China, and C Africa.

Acacia calcicola Forde & Ising in Trans. Roy. Soc. South Australia 81: 153 (1958).

Local Distribution: Introduced as an ornamental tree from Tropical Australia, and cultivated the municipal gardens in mountainous areas such as Sanaa, Ibb, and Taiz.

Global: C and EC Australia.

Acacia cyclops A.Cunn. ex G.Don in Gen. Hist. 2: 404 (1832).

Local Distribution: Introduced and cultivated at Agricultura Research & Extension. Authority (AREA) experimental farm in Taiz and Ibb.

Global: C and W Australia; introduced into S Africa and the Middle East.

Acacia salicina Lindl. in T.L. Mitchell, Three Exped. Australia 2: 20 (1838).

Local Distribution: Introduced and cultivated at AREA experimental farm in Taiz, Ibb, and Sanaa.

Global Distribution: C and E Australia; introduced into India.

Acacia saligna (Labill.) Wendl. in Comm. Acac. Aphyll.: 26. (1820).

Syns.: *Acacia cyanophylla* Lindl. in Edwards's Bot. Reg. 25(Misc.): 45 (1839).

Mimosa saligna Labill., Pl. Nov. Holl. 2: 86. t. 235 (1806).

Local Distribution: Introduced as an ornamental tree from Tropical Australia, and cultivated in the municipal gardens in mountainous areas such as Sanaa, Ibb, and Taiz. Global: SW Australia; introduced elsewhere.

Acacia stenophylla A.Cunn. ex-Benth.in London J. Bot. 1: 386 (1842).

Local Distribution: Cultivated in gardens in Aden.

Global: C and E Australia; introduced into India.

B. *Senegalia* Ref., Sylva Tellur.: 119 (1838).

(Type: *S. angustisia* (Mill.) Pedley).

Stipular spines are absent. Leaves bipinnate. Plants with prickles or if not, then extra floral nectaries absent from leaves (petiole, rachis). Flowers with a disc and ovary with a gynophore.

Senegalia asak (Forssk.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 507 (2013).

Syns.: *Acacia asak* (Forssk.) Willd. in Sp. Pl., ed. 4. 4: 1077 (1806).

Mimosa asak Forssk. in Fl. Aegypt.-Arab.: 176 (1775).

Local name: عسقي، ضهي Dhahi, A'ssaq.

Local distribution: Widespread on medium-altitude mountains e.g. Taiz, Adhale',

Abyen, Lahj, Yafea, Madint Ashsharq.

Global: NE Tropical Africa, Arabian Peninsula; introduced into India.

Senegalia hamulosa (Benth.) Boatwr.in Bot. J. Linn. Soc. 179: 293 (2015).

Syn.: *Acacia hamulosa* Benth. in London J. Bot. 1: 509 (1842).

Local name: قتاد، قفط Qatf, Qatad, Kadad.

Local distribution: S. of Tihama, E of Al Barh, Mareb, Radaa, Tur. Aden, Lahj. al

Jawf, Radaa, Shabwa, Hadhramaut.

Global: Ethiopia, to Kenya, Arabian Peninsula.

Senegalia laeta (R.Br. ex Benth.) Seigler & Ebinger in Phytologia 91: 27 (2009).

Syn.: *Acacia laeta* R.Br. ex Benth. in London J. Bot. 1: 508 (1842).

Local name: سمر، طلع Talh, Samer.

Local distribution: Al Hujailah, Hagdah & Annashamah (Taiz), Aden, Radaa, al Mishrafa, Heys, Ataq-Nissab (Shabwa), Arrayyan-Sayun (Hadhramaut).

Global: N and Tropical Africa, Palestine, and Arabian Peninsula.

Senegalia mahrana (Thulin & Al-Gifri)

Ragup., Seigler, Ebinger & Maslinin Phytotaxa 162: 175 (2014).

Syn.: *Acacia mahrana* Thulin & Gifri, in Nor. J. Bot. 20(6): 691-696 (2000)

Local Distribution: Sayhut-Al Qishn (Al Mahara).

Global: Endemic.

Senegalia mellifera (Vahl.) Seigler & Ebinger in Phytologia 92(1): 94. (2010).; subsp. ***mellifera***.

Syns.: *Acacia mellifera* (Vahl) Bosc in J.-F.-P. Déterville, Nouv. Dict. Hist. Nat., ed. 2, 1: 62 (1816).

Mimosa mellifera Vahl. in Symb. Bot. 2: 103 (1791).

Local Name: كتر، كداد، ضبيان، ظبية Katar, Qadad, Dabyean, Dhaba.

Local distribution: Egypt to Namibia; introduced into India and Pakistan.

Senegalia senegal (L.) Britton, in N.L. Britton & P. Wilson, Sci. Surv. Porto Rico & Virgin Islands 6: 538 (1930).

Syns.: *Acacia senegal* (L.) Willd., Sp. Pl. 4: 1077. (1806)

Mimosa senegal L., Sp. Pl. 521. (1753).

Local name: ثَمور Thamour.

Local distribution: Al Maraqisha (Abyen), Huf al Mahara, Yafea, Hodjeilah: - Wadi Mawad, Bajel., Al Hudaydah, Taiz.

Global: Tropical and S Africa, Arabian Peninsula to India (Regional endemic).

C. Vachellia Wight & Arn., Prodr. Fl. Ind. Orient. 1: 272 (1834).

(Type: *V. farnesiana* (L.) Wight & Arn.)

Stipular spines are present at least on young plants. Leaves bipinnate, flowers in spikes or heads, the latter always with an involucre on the

peduncle.

Vachellia edgeworthii (T. Anderson) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 512 (2013).

Syns: *Acacia edgeworthii* T. Anderson in J. Proc. Linn. Soc., Bot. 5(Suppl. 1): 18 (1860).

A. erythraea Chiov. in Fl. Somala 1: 163 (1929).

A. humifusa Chiov. in Fl. Somala 1: 163 (1929).

A. sultani Chiov. in Fl. Somala 1: 162 (1929).

Local name: حرزرز Harzarz.

Local Distribution: Aden, S. of Tihama, J. al Arays, Lahj, Soqotra.

Global: NE Tropical Africa to Kenya (Regionally endemic).

Vachellia etbaica (Schweinf.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 512 (2013)

Vachellia etbaica (Schweinf.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 512 (2013); subsp. ***etbaica***.

Syn.: *Acacia etbaica* Schweinf. in Linnaea 35: 330 (1868).

Local name: قرض، صاب Qarad, Sab.

Local Distribution: : Widespread: Taiz, al Qa'idah, Madinat Ashsharq, Huth-Harf. Sufyan, east al Hada, Baedan, Lahj, Utuma, Wussab, N of Radaa, W. of Dhamar, Adhale'.

Global: SE Egypt, to Tanzania (Regionally endemic).

Vachellia etbaica subsp. ***uncinata*** (Brenan) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 512 (2013).

Syn.: *Acacia etbaica* Schweinf. subsp. ***uncinata*** Brenan in Kew Bull. 12: 91 (1957).

Local distribution: Al Mahra: coastal mountains between Al Faydami and Hawf, uppermost, the plateau of the Jabal Chatan N of the village Con Huf al Mahara, J. Gedu (Shabwa), Hadramut in Jol Berka escarpment above wadi Al Muhammedin (upper wadi Fuwwah system), Al Mukalla - Sayun main road, the escarpment of the Jol plateau ca.30 km N of Riyan.

Global: Eritrea to Kenya, and Arabian Peninsula.

Vachellia flava (Forssk.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 513 (2013).

Syns.: *Acacia ehrenbergiana* Hayne. in Getreue Darstell. Gew. 10: t. 29 (1827). *Mimosa flava* Forssk. in Fl. Aegypt. -Arab.: 176 (1775).

Local name: سمر، سلام، سمر Samar- Salam-Selm.

Local distribution Tihama & foothills, western mountains, Saadah, Marib, Radaa, Harib, Abyen, Hadhramaut.

Global: N Africa, Sahara to Iran.

Vachellia farnesiana (L.) Wight & Arn., Prodr. Pl. Ind. Orient. 1: 272. (1834).

Syns.: *Acacia farnesiana* (L.) Willd. Sp. Pl. 4: 1083 (1806).

Mimosa farnesiana L., Sp. Pl. :521 (1753).

Local name: فتنة Fotna.

Local Distribution: often planted in gardens in Yemen.

Global: Native of America. Cosmopolitan in Tropics.

Vachellia gerrardi (Benth.) P.J.H.Hurter in D.J.Mabberley, Plant-book, ed. 3: 1021 (2008).

Syns.: *Acacia gerrardi* Benth. in Trans. Linn. Soc. London 30: 508 (1875).

A. pachyceras O. Schwarz, in Mitt. Inst. Allg. Bot. Hamburg 10: 85 (1939).

Local name: سمر، سنط، سمر Sant. Samer, Talh.

Local distribution: NE of Taiz, Al Qa'eda, Assayani, Dhamar, Sanaa, Sumara, Radaa, Ibb, al Baydha, Saada.

Global: Tropical and S Africa, S Palestine to Arabian Peninsula.

Vachellia harala (Thulin & Al-Gifri) Ragup., Seigler, Ebinger & Maslin in Phytotaxa 162: 176 (2014).

Syns.: *Acacia harala* Thulin & Al-Gifri in Nor. J. Bot. 20(6): 691-696 (2000).

Local name: حراله Haralah.

Distribution: (Yemen) Abyen, J. Gedu: Shabwa.

Global: Endemic.

Vachellia hunteri (Oliv.) Ragup., Seigler, Ebinger & Maslin in Phytotaxa 162: 176 (2014).

Syns.: *Acacia hunteri* Oliv in Hooker's Icon. Pl. 14: t. 1350 (1881).

Local name: سمر، ظبة Samer, Zaba.

Distribution (Yemen) Lahj, Mozaa.

Global: Endemic.

Vachellia johnwoodii (Boulos) Ragup., Seigler, Ebinger & Maslin in Phytotaxa 162: 177 (2014).

Syns.: *Acacia abyssinica* Hochst. ex Benth. var. *macroloba* Schweinf. in Bull. Herb. Boissier 4(App. 2): 212 (1896).

Acacia johnwoodii Boulos in Kew Bull. 50: 327 (1995).

Local name: ميار، طلح، سيار Seyar, Talh, Mayal.

Local distribution: J. Bura, J. Milhan, al Mishrafah: W. Rimaa, aqbanah & Sharab (Taiz), W. Beyhan.

Global: Saudi Arabia and Yemen (Near endemic).

Vachellia nilotica (L.) P. J. Hurter & Mabb. in Mabberley's Plant Book 1021. (2008)

Syns.: *Acacia nilotica* (L.) Willd. ex Delile, Fl. Aegypt. Ill.:79 (1813).

Mimosa nilotica L., Sp. Pl. :521 (1753).

Vachellia nilotica subsp. *indica* (Benth.) Kyal & Boatwr. in Bot. J. Linn. Soc. 172 (4): 515 (2013).

Syns.: *Acacia arabica* var. *indica* Benth. in Hook. Lond. J. Bot. 1: 500. (1842).

Acacia nilotica (L.) Delile var. *indica* (Benth.)

A. F. Hill in Bot. Mus. Leaflet.

Harvard Univ. 99. (1940).

Local distribution: Taiz, Tihama, Aden, Lahj, Abyen, Lawder, Adhale, Soqotra.

Global: Arabian Peninsula, Iran to India, introduced into E Africa and Australia.

Vachellia nilotica subsp. *kraussiana* (Benth.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 515 (2013).

Syns.: *Acacia nilotica* (L.) Willd. ex Delile; subsp. *kraussiana* (Benth.) Brenan. in Kew Bulletin 12(1): 84 (1957).

Local distribution: Taiz, Aden, Radaa, Adhale', Damt, Utuma, Madinat Ashsharq. Global: S Africa, Ethiopia, Arabian Peninsula and NW India.

Vachellia oerfota (Forssk.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 515 (2013)

Vachellia oerfota* var. *brevifolia (Boulos) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 515 (2013).

Syns.: *Acacia oerfota* var. *brevifolia* Boulos, in Kew Bull. 50:334 (1995).

Acacia sarcophylla Chiov. in Fl. Somalia 1: 161 (1929).

Local name: حرر، حرحير

Local distribution: Soqatra, 3km NE of Qalansiyah., Sandy headland 2km W of Qaysoh., Qalansiyah Palin c 2 km S of Qalansiyah, Abdul Kuri Island, Hamada, near Shuqra; Aden: jebel Shamsan: Tower of Silence and vicinity; Al-Shiaab near bayhan airport; Sanaa: Al Harrah, Rada'.

Global: Oman, Saudi Arabia, Somalia. (Regional Endemic).

Vachellia oerfota (Forssk.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 515 (2013); var. *oerfota*.

Syns.: *Acacia nubica* Benth. in London J. Bot. 1: 498 (1842).

Acacia oerfota (Forssk.) Schweinf. in Bull. Herb. Boissier 4(App. 2): 213 (1896).

Local name: عرفط، لعوت. Arkat, La Aut.

Local distribution: Tihama, N of Taiz, Jiblah, Aden, Mareb, Radaa, Bani salam (w. of Maaber), Harib, Qa Bakil, Abyen, Lahj, Shibam, Hadhramaut.

Global: NE Tropical Africa, Arabian Peninsula to Iran.

Vachellia origena (Hunde) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 515 (2013).

Syns.: *Acacia origena* Hunde in Nordic J. Bot. 2: 337 (1982).

Local name: طلع أبيض، كهلب، طلع Talh Abiad, Kahlab, Talh.

Local distribution: High altitude areas e.g. J. Saber and At Turba, Ibb, Dhamar, Sanaa, Haraz, Shibam. Yafea.

Global: Eritrea, Ethiopia, Saudi Arabia (Regional endemic).

Vachellia pennivenia (Balf.f.) F.L. Anderson & Knees in Edinburgh J. Bot. 76: 314 (2019).

Syns.: *Acacia pennivenia* Balf.f. in Proc. Roy. Soc. Edinburgh 12: 404 (1884).

Local name: تمهر Tamhar.

Local Distribution: Soqatra: N. coast, between Muri and Hadibu, Shuab, W coast S of Galansia, limestone hills N of the *Avicennia marina* mangrove, Hammaderoh.

Global: Endemic.

Vachellia seyal (Delile) P. J. H. Hurter in D.J. Mabberley, Plant-book., ed. 3: 1021 (2008).

Syns.: *Acacia seyal* Delile, Fl. Egypt. 142. t. 52. f. 2. (1813).

Local name: سمر، سيال، طلح Samer, Seyal, Talh.

Local distribution: Taiz, W. of Tareem, Tihama foothills, Wussab, Rihab, Huth.

Global: Pakistan, India, Africa, Saudi Arabia.

Vachellia tortilis (Forssk.) Galasso & Banfi in Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano 149(1): 150. (2008).

i. ***Vachellia tortilis*** subsp. *campoptila* (Schweinf.) Ragup., Seigler, Ebinger & Maslin in Phytotaxa 162: 177 (2014).

Syn. *Acacia campoptila* Schweinf. in Bull. Herb. Boissier 4(App. 2): 208 (1896).

Local name: سمر، سويل، سنط Sant- Sweil, Samer.

Local distribution: Marib, Radaa, Harib, Dhawran, Hadhramaut.

Global: Endemic.

Vachellia tortilis (Forssk.) Galasso & Banfi in Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano 149(1): 150 (2008) subsp. *tortilis*

Syns.: *Acacia tortilis* (Forssk.) Hayne, Arzneyk. :10. t 31 (1827).

Mimosa tortilis Forssk., Fl. Aegypt.-Arab. :176 (1775).

Local name: حراز، سمر Harz, Samer.

Local distribution: Tihama, Hagda & Bani Shayba (Taiz), Aden, Abyen, Lahj.

Global: Algeria to Egypt and Saudi Arabia, Yemen, Southwards to S. Africa, India and Pakistan.

Vachellia tortilis subsp. *spirocarpa* (Hochst. ex A. Rich.) Kyal. & Boatwr. in Bot. J. Linn. Soc. 172: 517 (2013).

Syns.: *Acacia spirocarpa* Hochst. ex A. Rich. car. Crenata Chiov. in Tent. Fl. Abyss. 1: 239 (1848).

Acacia tortilis (Forssk.) Hayne subsp. *spirocarpa* (Hochst. ex A. Rich.) Bren; in Kew

Bull. 12(1): 88 (1957).

Local name: سامور Ssmur.

Local distribution: Shabwa, Mareb, Hadhramaut: track from Mukalla to Bayn- al-Gibal, Wadi Shahora.

Global: NE Tropical Africa to Namibia.

Vachellia yemenensis (Boulos) Ragup., Seigler, Ebinger & Maslin in Phytotaxa 162: 178 (2014.)

Syns.: *Acacia yemenensis* Bolous subsp.

obtusifoliolata Boulos, Kew Bull. 50 (2): 333 (1995).

A. yemenensis Bolous. in Kew Bull. 50: 330 (1995), subsp. *yemensis*.

Local name: يهسل، حراز، حروض- Yashal. Haraz, Harodh.

Local Distribution: J. Saber, Al Janadyah, Al Hujariyah and Tha'bat (Taiz), N of Al Qai'da, J. Sumara, Ibb, Dhisufal, Assayani, Jiblah, J. Jihaf, Adhale', J. An Nasira (Hajjah), Huth, Kuhlan, Shaharah, N of Raydah.

Global: Endemic.

Table 1 . Endemic, Near Endemic and Regional Endemic Taxa:

Taxa	Genus	Endemic	Near endemic	Regional endemic	Arabian Peninsula and East Africa
<i>Senegalia senegal</i> (L.) Britton.	<i>Senegalia</i>		×		Saudi Arabia, Oman, Somalia, Ethiopia, Kenya
<i>S. mahrana</i> (Thulin & Al-Gifri) Ragup.			×		
<i>Vachellia edgeworthii</i> (T.Anderson) Kyal. & Boatwr.	<i>Vachellia</i>			×	NE Tropical Africa to Kenya
<i>Vachellia etbaica</i> (Schweinf.) Kyal. & Boatwr. subsp. <i>etbaica</i>				×	SE Egypt, Sudan, Somalia, Eretria, Djibouti
<i>V. harala</i> (Thulin & Al-Gifri) Ragup.				×	
<i>V. hunteri</i> (Oliv.) Ragup.				×	
<i>V. johnwoodii</i> (Boulos) Ragup.				×	Saudi Arabia
<i>V. oerfota</i> (Forssk.) Kyal. & Boatwr. var. <i>brevifolia</i> (Boulos) Kyal. & Boatwr.				×	Saudi Arabia, Oman, Somalia
<i>V. origena</i> (Hunde) Kyal. & Boatwr.				×	Saudi Arabia, Ethiopia,
<i>V. pennivenia</i> (Balf.f.) F.L.Anderson & Knees				×	
<i>V. tortilis</i> (Forssk.) Galasso & Banfi subsp. <i>campoptila</i> (Schweinf.) Ragup.,				×	
<i>V. yemenensis</i> (Boulos) Ragup., Seigler, Ebinger & Maslin				×	
Total	2	6	1	5	

taxa (only known from East Africa and the Arabian Peninsula) are also recorded (Table 1).

Conclusion:

An updated checklist of *Acacia s.l.* in the Yemeni flora is provided, according to APG Systems. The authors believe that this update will serve as a starting point for Arabian botanists to track and update the Yemeni and Arabian flora. The current study revealed the presence of six species of *Acacia s.s.*, mostly introduced, fifteen species of *Vachellia* (including seven subspecies and two varieties), and six species of *Senegalia* in the flora of Yemen the study also exhibited the presence of six endemic taxa and one near-endemic (Yemen and Saudi Arabia) and five regional endemics

References:

- Al-Khulaidi AA. 2013. Flora of Yemen. Sustainable Natural Resource Management Project (SNRMP) II, Sana'a, Yemen.
- Blatter, E. 1914 -1916. Flora of Aden, Records of the Botanical Survey of India , Vol, 7(1-3). Calcuta, India.
- Blatter, E. 1919. Flora of Aden, Records of the Botanical Survey of India , Vol, 8 (1). Calcuta, India.
- Boulos, L. 1988. A Contribution to the Flora of South Yemen. Candollea. Geneva, 43: 549-585.
- Boulos, L. 1995. Notes on *Acacia* Mill. Studies in

- the Leguminosae of Arabia: I, Kew Bulletin.. 50 (2): 327-337.
- Chaudhary, A. A. 1983. *Acacia* and other genera of Mimosoideae in Saudi Arabia. National Herbarium Regional Agriculture and Water Research Center. Al-Khaled Offset Press, Riyadh.
- Deflers, A. 1889. Voyage au Yemen. Journal d'un excursin botanique faite en 1887 dans les montagnes de l'Arabie Heureuse. Paris. 226 pp.
- Dubaie, A.S. and Al-Khulaidi, A.A. 1990. Studies on the Genus *Acacia* Mill. in Yemen. Bull. Fac. Sci. Assiut Univ. 20 (2-D): 43-62, Assiut, Egypt.
- Forsskål P. 1775. Flora Aegyptiaco-Arabica. Haunia. 182 pp.
- Gabali, S. A. and Al-Gifri, A. N. 1990. Flora of South Yemen - Angiosperm. A provisional checklist. Feddes Repertort. 101:373-383.
- Hassan, A. R. and Hamdy, S. R. 2021. Synoptic Overview of Exotic *Acacia*, *Senegalia* and *Vachellia* (Caesalpinioideae, Mimosoid Clade, Fabaceae) in Egypt. Plants: 1-57
- Hosni, A. H., and E. M. Shams 2022 Contribution to the Flora of Egypt: Taxonomic and Nomenclature changes. *Taekholmia* 42: 12-26.
- Lock, J.M. (1989). Legumes of Africa a check-List: 1-619. Royal Botanic Gardens, Kew.
- Mabberley, D.J. 2008. *Mabberley's Plant-Book*. Cambridge University Press.
- Maslin, B.R., Ho, B.C., Sun, H. and Bai, L. (2019) Revision of *Senegalia* in China, and notes on introduced species of *Acacia*, *Acaciella*, *Senegalia* and *Vachellia* (Leguminosae: Mimosoideae). *Plant Diversity* 41, 353-480.
- Miller, J. T., Terra, V., Riggins, C., Ebinger, J. E., and Seigler, D. S. 2017. Molecular phylogenetics of *Parasenegalia* and *Pseudosenegalia* (Fabaceae: mimosoideae). *Systematic Botany*, 42(3), 465-469.
- Miller, J.T. and D. Seigler. 2012. Evolutionary and taxonomic relationships of *Acacia* s.l. (Leguminosae: Mimosoideae). *Austr. Syst. Bot.*, 25: 217-224.
- Orchard, A.E. and B.R. Maslin. 2003. Proposal to conserve the name *Acacia* (Leguminosae: Mimosoideae) with a conserved type. *Taxon*, 52: 362-363.
- POWO 2023. "Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <http://www.plantsoftheworldonline.org/> Retrieved 07 January 2023."
- Schweinfurth, G.A. 1888-1889. *Arabische Pflanzennamen aus Ägypten, Algerien und Jemen* (Arabic plant names from Egypt, Algeria and Yemen) (in Arabic and German). Berlin: Reimer.
- Shams, E., Hosni, H., hosny, A., Rabei, S., and Elgamal, I. 2023. Contribution to the Flora of Egypt: A critical inventory of newly recorded vascular taxa of Egypt. *Scientific Journal for Damietta Faculty of Science*, 13(3), 111-149. doi: 10.21608/sjdfs.2023.247544.1141
- Thulin, M. 1993. *Flora of Somalia 1: 1-493*. The Royal Botanic Gardens, Kew.
- Wood, J.R.I. 1997. *A handbook of the Yemen Flora: 1-434*. Royal Botanic Gardens, Kew.

الملخص العربي

عنوان البحث: : جنس الطلح او السنط Fabaceae في اليمن

عبد الولي الخليدي^١، سامي ربيع^{٢*}، عبد الناصر الجفري^٣

^١ هيئة البحوث والارشاد الزراعيه اليمن..متعاقد مع المركز الوطني لتنمية الغطاء النباتي ومكافحة التصحر، السعوديه
^٢ قسم النبات والميكروبيولوجي - كلية العلوم جامعة دمياط - دمياط - مصر
^٣ قسم علوم الحياة كلية العلوم جامعة عدن - اليمن.

في هذه الورقة ، سيتم تحديث المعاملة الاسمية للأنواع المحلية والمُدخلة من جنس الطلح الأكثر شيوعاً في الفلورا اليمنية .
Acacia s.l. تم اعداد الدراسة بالرجوع إلى العديد من مصادر المعلومات مثل الابحاث المتوجدة وقواعد البيانات ذات الصلة على الإنترنت. تشير الدراسات التطورية الجزئية الحديثة إلى أن *Acacia s.l.* جنس غير أحادي المنشأ وهناك دعم قوي للاعتراف بخمسة أجناس. ومن ثم يجب أن تتغير الهوية الكلاسيكية *Acacia s.l.* ونتيجة لذلك، تم نقل الوضع الحالي لمختلف الأصناف الموجودة في اليمن، والتي كانت توضع سابقاً في *Acacia s.l.* إلى *Vachellia* and *Senegalia*. *Acacia s.s.* وقد نتج عن ذلك إلى وجود ستة أنواع من السنط ، وخمسة عشر نوعاً مع العديد من تحت الأنواع من *Vachellia* وستة أنواع من *Senegalia*.