

On the geographical distribution of *Rosa abyssinica* (Rosaceae)

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ABSTRACT: The geographical distribution, variability and affinities of *Rosa abyssinica* R. Brown ex Lindley are discussed.

KEY WORDS: *Rosa*, distribution, Africa, Arabian Peninsula

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The range of the genus *Rosa* L. is associated mainly with temperature regions of the Northern Hemisphere and beside the small intercontinental disjunction between Eurasia and North America it is more or less continuous. One of the few islands isolated from the main area is formed by the range of *R. abyssinica* R. Brown ex Lindley which covers north-eastern Africa and southern regions of the Arabian Peninsula. It is separated from the continuous range of the genus by the distance of about 800 km and at the same time it is the southernmost area of the occurrence of wild roses in the world.

For the first time *R. abyssinica* was found in 1805 in Abyssinia by R. Salt, but it was named in 1814 by R. Brown, who published only its name (without diagnosis) in the appendix to Salt's "A voyage to Abyssinia". Formally this rose was described by Lindley in 1820 in his "Rosarum Monographia", where there is also the first illustration of this interesting species. Until quite lately it was the only illustration of *R. abyssinica*. Its colourful photographs have been published recently by Abdulfatih (1984) and Collenette (1985).

Rosa abyssinica is an evergreen climber with strong densely prickly stems, white flowers compound in rather few-flowered inflorescences and long styles connected in a delicate column. This latter character indicates univocally the placement of *R. abyssinica* in section *Synstylae* DC., this being chiefly represented in south-eastern Asia.

It seems to be most closely related to *R. brunonii* Lindley (*R. moschata* J. Hermann s. lato) occurring at the southern foot of the Himalayas. The differences between these

two species are more strongly marked only in the type of armature, size of leaves and chiefly in their ranges.

The opinion of Boulos (1985) that *R. abyssinica* is identical to *R. arabica* Crépín from Sinai is groundless. The latter species, being probably conspecific with *R. agrestis* Savi, belongs undoubtedly to section *Caninae* DC. The authentic specimens of *R. arabica* (Schimper No 4, in B) leave no room for doubt in that respect.

Rosa abyssinica is a rather variable species and this is manifested primarily in the size of leaves, the degree of glandulosity of pedicels, number of flowers in inflorescences, etc. Basing on the combination of these characters Boulenger (1933) distinguished several species in this complex, which were to be distinct and independent in his opinion, including *R. schweinfurthi* Bouleng., *R. botaiana* Bouleng., *R. barbeyi* Bouleng. These species, however, have never been generally accepted. In practice the attention of botanists is attracted by small-leaved specimens of *R. abyssinica*, occurring, as it seems, here and there throughout the range of the species. They are usually recognized as *R. abyssinica* var. *microphylla* Crépín or *R. abyssinica* fo. *microphylla* (Crépín) Almagia.

The discovery of *R. abyssinica* in north-eastern Africa was a real surprise. In course of time it appeared, however, that *R. abyssinica* is a common species in Ethiopia, and additionally it occurs frequently in south-western Saudi Arabia (Asir and S Haijaz) and in North Yemen. The species has been discovered also on a few localities in the countries neighbouring with Ethiopia, namely in Somalia and south-western Sudan, near the border with Ethiopia on Jebel Hamoyet (Fig. 1).

In the north, in Saudi Arabia *R. abyssinica* does not appear beyond 22°N, while in the south in Ethiopia it only slightly crosses 8°N. In the west it occurs along the western coast of Tana Lake up to 38°E and in the east it occurs in Somalia up to 48°E. Thus the range of *R. abyssinica* falls entirely within the Eritreo-Arabian Province (after Zohary 1973) belonging to the Palearctic Kingdom; however, the species is lacking in South Yemen.

Rosa abyssinica is a mountain species growing usually above 1800–1900 m, most frequently, however, between 2000 and 2400 m. Only sporadically it can be observed at a lower elevation as in Abalah in Saudi Arabia, where it descends to 800–900 m. Its highest localities have been recorded at an elevation of 2800 m (Jabal Sawdak in Saudi Arabia). The species grows most frequently on barren, eroded slopes covered with remnants of *Acacia* scrub, in loose *Juniperus excelsa* woods etc. Most luxuriant specimens one can find in more humid places, in valleys of periodical streams or in shady gorges, where it sometimes climbs on neighbouring trees and shrubs up to 8–10 m or even more.

The distribution map for *R. abyssinica* has been completed on the basis of the herbarium specimens cited below. Additionally, literature records have been used from the following authors: Blatter (1921), Boulenger (1933), Deflers (1889), Fiori (1912), Glen and Hardy (1987), Hepper (1976), Lanza and Mattei (1910), Oliver (1871), Pirotta (1903), Schwarz (1959), and Schweinfurth (1894).

SPECIMENS EXAMINED. SAUDI ARABIA. Abalah, 1 km after sign Taif, 2000–3000', 17.6.1977, *Turner* DT 97/77/2 (BM); 100 km south of Baljurshi, Taif – Abha road, 6100', 13.4.1979, *Collenette* 1340 (E, K); Balqara Region, 19°15'N – 42°05'E, 2100 m, 24.11.1981, *El-Sheikh et al.* 81-663 (BSB); 75

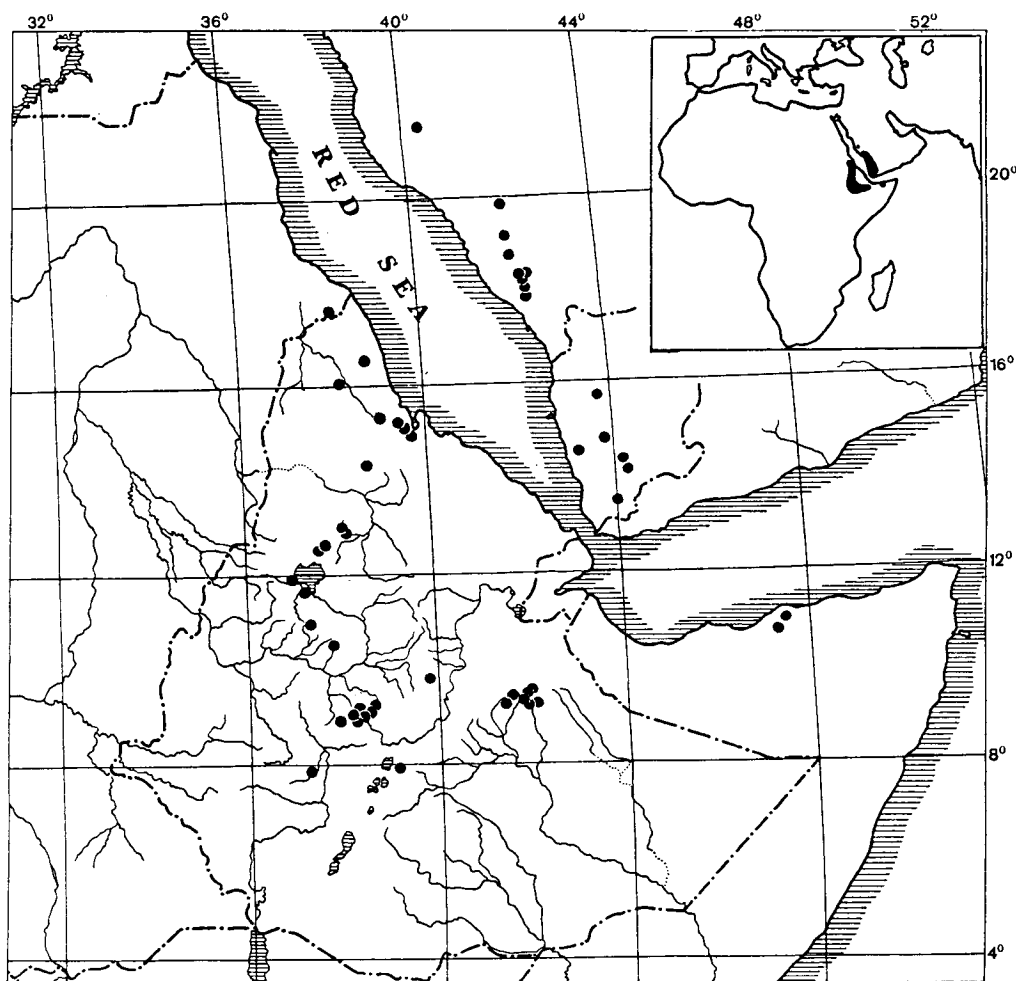


Fig. 1. Distribution map for *Rosa abyssinica* R. Br. ex Lindl.

km vor Abha aus Richtung Taif, 18°10'N – 42°15'E, 2400 m, 25.11.1981, *El-Sheikh et al.* 81-708 & 81-709 (BSB); Jabal Sawdak 18°19'N – 42°22'E, 2800 m, 7.4.1982, *Baierle et al.* 82-1361 & 82-1391 (BSB); Jabal Sawdak, 18°17'N – 42°21'E, 2800 m, 14.8.1982, *Hassar et al.* 82-229 (BSB); Suda, Asir, 1.7.1946, *Fitzgerald 10676/3* (BM); on Gebel Soda, 9200', 11.9.1952, *Tothill 112* (BM); Sooda Mountains bei Abha, 2650 m, 27.11.1981, *El-Sheikh et al.* 81-818 (BSB); Al Mujaddah, summit, 18°16'N – 42°21'E, 24.10.1969, *Mandeville 2589* (BM); Jabal Sawdak, 18°20'N – 42°20'E, 2650, *El-Sheikh et al.* 81-821 (BSB); 40–42 km S of Abha, near Al-Jarrah, National Park and Tamniah village, 24.5.1980, *Boulos & Ads 14271* (K); Al-Mansah, 8 km SW of Abha, 20.5.1980, *Boulos & Ads 14086* (K); Asir, 18.5.1982, *B. Vincett s.n.* (BM); Südl. Hedjaz, Gebirge Na'as, *Inst. f. Völkerkunde d. Univ. Wien 93* (W); Wasserfall Al-Dahna bei Tahnoma, 2000 m, 18°55'N – 42°12'E, 24.11.1981, *El-Sheikh et al.* 81-686 (BSB); Saudi-Arabia, 9.6.1936, *Philby s.n.* (BM).

YEMEN. Hajjah, c. 4000', 7.3.1973, *Wood 73/46* (BM); just W of Manakhah, on roadside to Hajarrah, 2400 m, 21.8.1977, *Radcliff-Smith & Heachie 4671* (K); Menakhah, 2000 m, 22.2.1889, *Schweinfurth 1938* (LE); halfway between Ibb and Yerrim Plain, 27.11.1971, *Brunt s.n.* (BM); Ta'izz, Wadi

Thabad, N face of Jebel Sabir, 5000–5900', 25.12.1937, *Scott & Britton 356* (BM); Jebel Sabir, Taiz (above Dar An Nasr), 2300 m, 29.2.1974, *Wood Y/74/318* (BM); Jebel Sabir, above Taizz, 2400–2700 m, 21.10.1975, *Hepper 5938* (K); Jebel Sabir, above Taizz, 2800 m, 3.8.1977, *Radcliff-Smith & Heachie 4407* (K); Mahwit, 4000', 29.2.1972, *Wood 72/11* (BM).

SUDAN. Near summit of Jebel Hamoyet, Red Sea Hills, 17°33'N – 38°00'E, 2700 m, 21.4.1959, *Jackson 3971* (K).

ETHIOPIA. Habab: Bagla, 7000', *Hildebrandt 606* (BM, W); Asmara, 2300 m, 14.5.1892, *Schweinfurth & Riva 2104* (K, LE); Bei Halai, 2600 m, 28–30.4.1894, *Schweinfurth 245* (K); Saganeiti, gorge de Degerra, 2200 m, 10.3.1892, *Schweinfurth & Riva 884* (K, LE); Senafe, 8600', 11.9.1954, *Colville 65* (K); in regione inferiori montes Scholada, 20.6.1837, *Schimper 189* (K, W); Simien: from near Derasghié, over 9000', 12.1.1952, *Scott 293* (K); Semien-Lungo il. Mai Sciaha, 2840 m, 11.4.1937, *Pichi-Sermolli 662* (K); valle tra monte Jabéc e M.Coco (Nord di Gondar), Missione al lago Tana, 26.1.1937, *Pichi-Sermolli 662* (W); Presso il villaggio di Baschiamia (Tucur Dinghia – Gondar), 24.1.1937, *Pichi-Sermolli 663* (K); Pianura di Dukulcan Jesus (Alefa), 28.2.1937, *Pichi-Sermolli 661* (K); Lake Tana region, Dangyla, 6700', 4.7.1926, *Cheesman s.n.* (BM); Choké Mts. Gojjam, vicinity of the upper Giedeb valley, 10°40'N – 37°50'E, 6.8.1957, *Evans 100* (K); W of Addis Ababa, near the end of the road approaching summit of Mt. Menagashe, Menagashe Nat. Forest. 9500', 8°58'N – 38°32'E, 26.11.1964, *Perdue Jr. 6313* (K); Shoa Prov., Managasha Nat. Forest, 55 km west of Addis Ababa, 8°58'N – 38°35'E, 19.11.1961, *Meyer 7486* (K); about 5 km NW of Addis Ababa, ca 2600 m, 27.3.1965, *de Wilde 5969* (B, K); near Holetta Farm, 26 miles W of Addis Ababa, 7500', 12.5.1957, *Mooney 4815* (B, K); in open hill-top behind British Embassy, 8700', 3.5.1953, *Mooney 4736* (K); Addis-Ababa, 4.2.1924, *Schantz 26* (K); Addis-Ababa, 2430 m, 23.2.1970, *Ash 248* (K); Addis-Ababa – common shrub, *Curle 54* (BM); near Addis Ababa, 17 km NE along Dessie Road, Shoa Prov., 17.12.1968, *Gilbert 1102* (K); Kolife area, just W of Addis Ababa, near Jimma Road, 8000', 9°02'N – 38°43'E, 20.11.1964, *Perdue 6298* (K); Entotto Mt., above Addis-Ababa, 2800 m, 9°02'N – 38°47'E, 6.12.1961, *Meyer 7612* (K); growing on roadside on km 230 from Addis Ababa to Jimma road, 24.12.1962, *Hagos 37* (K); Asella, 7°55'N – 39°05'E, 2250 m, 5.6.1962, *Brehme 8977* (K); Gara Ader, ca. 18 km E of Arna, 8200', 9°17'N – 41°13'E, 19.8.1962, *Burger 2082* (K); Mt. Achim, Harar prov., 6800', 14.10.1954, *Bally 10075* (K); Harar Prov., vicinity of Garsa, 6500', 15.8.1962, *Lewis 5954* (K); Tabo, 25 miles SW of Ambo, 8300', 6.3.1956, *Mooney 6647* (K); Hararge Prov. N.Carsa, 2000 m, 9°25'N – 41°48'E, *Robertson 1321* (K); Mt. Gara Mulatta, at 28 km W of Alemaya, 2600 m, 3.2.1966, *de Wilde 9936* (K); Harar, near Dira Dewa, 20.8.1968, ? *A60* (K); Harar, 9°18'N – 42°06'E, 6300', 17.12.1933, *Gillett 5031* (K); Wolkefit Pass, Seyman Mts., 2.1973, *Polunin 11636* (K); Between Gjeni-Gjeni (la Djeni), 8800–9000', Wouramboulehi, 9.10.1926, *Cooper s.n.* (K); Amasen: Da Belsa a Dega Trose Caramy, 3.2.1902, *Pappi 2605* (BM, W); Assaorta: bosco del Caribozzo, 2700 m, 19.8.1902, *Pappi 2824* (K, BM, W); Amasen: Ad-Rassi, 28.4.1902, *Pappi 4918* (W); Ad Teclesan, 700', 20.3.1949, *Bally 6659* (K); Lófhó, 10.5.1854, *Schimper* (W).

SOMALIA. Daloh, 18 miles N of Erigavo, 6700', 6.11.1954, *Bally 10352* (K); in Obda, Dolo near Erigavo, 7.7.1945, *Glover & Gilliland 1128* (K); Shimba Boris, Surud Range, 10°45'N – 47°12'E, 6759', 16.12.1929, *Collenette 363* (K).

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STRESZCZENIE

Na podstawie rewizji materiałów zielnikowych oraz danych z literatury autorzy opracowali punktową mapę rozmieszczenia *R. abyssinica* R. Brown ex Lindley (sect. *Synstylae*). Jej zasięg obejmuje południowe rejony Półwyspu Arabskiego i północno-wschodnią Afrykę tworząc wyspę izolowaną od ± zwartego zasięgu gatunku o około 800 km. Jest to najdalej na południe wysunięty obszar występowania dzikich róż.

Rosa abyssinica jest gatunkiem górskim, który rośnie z reguły powyżej 1800–1900 m, a najczęściej między 2000 a 2400 m n.p.m. Najwyżej dociera ona na wysokość 2800 m, natomiast najniżej położone jej stanowiska znajdują się na wysokości 800–900 m n.p.m. Rośnie najczęściej na nagich, zerodowanych zboczach pokrytych resztkami zarośli akacjowych, w rozrzedzonych lasach *Juniperus excelsa* itp.