## G. Sandral, M. V. Remizowa & D. D. Sokoloff

corolla red. Wings not adhering together in their distal parts. Keel tip straight. Stylodium 5–7 mm long, tooth always present, glabrous. Ovary glabrous or with hairs along the ventral slit only. Fruit straight, not or slightly constricted between seeds, about two times longer than the calyx.

Examined specimens: **Chad**: Rossetti 73, Tibesti region, Toussidé, 3000 m, 17 Sep. 1958 [BM]; Tilho s.n., Tibesti, Volcan de l'Emi-Koussi, Bédéoudi, 1912–1917 [P].

- (6) Lotus assakensis Brand, Bot. Jahrb. Syst. 25: 199 (1898). Lectotype (designated by Mader & Podlech 1989, Mitt. Bot. Staatssaml. München 28: 534): Mardochèe s.n., Assaka, 1875 [P!, isolectotype G, K!, MPU].
- = Lotus ifniensis Caball., App. Disc. Apert. Curso Acad.: 1 (1936). ≡ Lotus chazaliei H. Boissieu var. ifniensis (Caball.) Maire, Bull. Soc. Hist. Nat. Afrique N. 30: 339 (1939). Lectotype (see Mader & Podlech 1989, Mitt. Bot. Staatssaml. München 28: 535): Caballero s.n., in arenosis maritimis prope Sidi Ifni, Jul. 1934 [MA].

Perennial herb or half-shrub. Leaves shorter than stem internodes (at least in main shoots), sessile, pinnate or almost palmate, with five leaflets. Stipules not detectable. Leaflets on short petiolules up to 0.6 mm long. Leaf rachis considerably flattened, up to 1 mm wide, up to 2 mm long, much shorter than basal leaflets. Basal leaflets (1.5)2–7 mm long, with maximum width in the lower part of a leaflet, typically ovate or orbicular and more or less unequally sided. All three distal leaflets attached to the top of the rachis. Distal leaflets longer than or as long as basal leaflets, (2)3–9 mm long, with maximum width in the upper part of a leaflet, obovate or oblanceolate. Stems and leaves with dense indumentum of straight patent hairs; stem surface usually not visible between hairs. Shoots without clear differentiation into distal zone with lateral umbels and proximal zone with paracladia (or innovation shots). Additional buds in any node of the main shoot may give rise to shoots repeating structure of the main shoot. Umbel peduncles 2-5 times longer than their subtending leaves. Sterile bract shorter than the calvx, with (2)3 leaflets and shortened rachis. Umbels 1-6-flowered. Flower subtending bracts present as small dark glands. Pedicels 1-2 mm long. Calyx 5-9 mm long, monosymmetric, but almost not two-lipped. Teeth longer or shorter than the tube. Upper teeth wider than and longer than or as long as lower ones. Calyx tube and teeth with more or less patent hairs outside; teeth also with appressed hairs inside. Petals yellow, standard often with red strips inside. All petals glabrous (except Fernandez Casas & Molero 13699, which has standard with some hairs on the outer surface), of almost the same length or wings shorter than keel and standard. Wings 8-12 mm long and (2)2.5-3.5(4.5) mm wide, usually not adhering together in their distal parts. Keel 9–13 mm long, tip straight. Stylodium 5.5–7 mm long, tooth always present, glabrous, 0.2-0.7 mm long. Ovary and fruit with hairs along the ventral suture, otherwise glabrous. Fruit straight, not or slightly constricted between seeds, 2.5-4 times longer than the calyx.

Examined specimens: Morocco: Ait Lafkih et al. 819, 40 km NW from Agadir, on coast road to Essaouira, 4 km N of Cap Rhir lighthouse, 30°40'N, 9°53'W, 20 m, 21 Jul. 1989 [RNG]; Anonymous (Reading Unin./ BM Exped.) 351, 40 km S of Agadir, estuary of Oued Massa, 30°10'N, 9°45'W, 5 m, 6 Jun. 1974 [RNG]; Damblon 84/40, Prov. Agadir, Tamri, 6 Dec. 1984 [MA]; Davis 53754, dist. Tiznit, near mouth of Oued Massa, 5–10 m, 27 Mar. 1972 [RNG]; Davis 53947, between Tamri and cap Rhir, 20 m, 1 Apr. 1972 [RNG]; Fernandez Casas & Molero 13699, Tarfaya – Tan-Tan, prope Sabkhat Tazgha, 20 m, 30 Apr. 1992 [RNG]; Fernandez Casas & Susanna 8738 and s.n., Safi, junto a Tamri, 30°43'N, 9°50'W, 13 Oct. 1984 [AD, RNG];

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Lewalle 11113, Tiznit, Aglon, 10 m, 25 Oct. 1984 [RNG]; Mardochèe s.n., Assaka, 1875 [P, K]; Merxmüller & Oberwinkler 22414, Haha: Hauptstrasse zwischen Essaouira (Mogador) und Agadir entlang der Küste nordlich Cap Rhir, 50 m, 12 Apr. 1967 [M]; Miller et al. 566 and 572, 18 km W of Tiznit, Sidi Moussa d'Aglou, 29°8'N, 9°8'W, 5 m, 3 Apr. 1972 [RNG]; Perring s.n., Massa, 3 Apr. 1993 [RNG]; Podlech 48679, N'Rand der Sebkha Tah, 3 km E der Hauptstrasse von Tarfaya nach Layoune, 6 km NE Tah, ca. 30 m, 28 Mar. 1990 [M]; Podlech 48712, Oued-ez-Zehar, ca. 67 km WSW Tan-Tan-Plage an der Strasse nach Tarfaya, ca. 10 m, 29 Mar. 1990 [M]; Schuhwerk 90/319 and 90/320, 7 km SW Akhjfennir, Sebkha N der Strasse P 41 von Tan-Tan nach Tarfaya, 28 Mar. 1990 [M].

(7) Lotus pseudocreticus Maire, Weiller & Wilczek, Bull. Soc. Hist. Nat. Afrique N. 26: 120 (1935). – Holotypus: Maire & Wilczek s.n., in arenosis ad oustium fluminis Sous, 2 Apr. 1934 [P!].

Perennial herb or half-shrub with erect or prostrate shoots. Leaves shorter than stem internodes (at least on long shoots), sessile, pinnate, with five leaflets. Stipules not detectable. Leaflets on short petiolules up to 0.7 mm long. Leaf rachis considerably flattened, up to 1.5 mm wide, 0.5-2 mm long, much shorter than basal leaflets. Basal leaflets (1.5)2-7 mm long, with maximum width usually in the lower part of a leaflet, typically ovate (less often elliptic or orbicular) and more or less unequally sided. All three distal leaflets attached to the top of the rachis. Distal leaflets usually longer than or as long as basal leaflets, 2.5–11 mm long, with maximum width in the upper part of a leaflet, obovate or oblanceolate. Stems and leaves with dense indumentum of straight appressed hairs; stem surface not visible or rarely visible between hairs. Shoots without clear differentiation into distal zone with lateral umbels and proximal zone with paracladia (or innovation shoots). Additional buds in any node of the main shoot may give rise to shoots repeating structure of the main shoot. Umbel peduncles (2.5)4-6 times longer than their subtending leaves. Sterile bract shorter than or as long as the calyx, with 1-3 leaflets and shortened rachis. Umbels 1-6-flowered. Flower subtending bracts usually present as small dark glands. Pedicels 1–2 mm long. Calyx 7–8 mm long, pronouncedly monosymmetric and only slightly two-lipped. Teeth slightly longer to slightly shorter than the tube. Upper teeth longer and wider than lower ones. Calyx tube and teeth with straight appressed or almost patent hairs outside; teeth also with appressed hairs inside. Petals yellow with red veins on the inner side of the standard. All petals glabrous, of almost the same length (or wings slightly shorter than other petals), 10–14 mm. Wings 2.5–3.5 mm wide, usually adhering together in their distal parts. Keel tip straight. Stylodium 6-8 mm long, tooth present, 0.5–0.7 mm long. Ovary and fruit with hairs along the ventral suture, otherwise glabrous. Fruit straight, not or slightly constricted between seeds, 1.5–4 times longer than the calvx.

Examined specimens: **Morocco**: *Damblon 84/40*, Tamri, 6 Dec. 1984 [MA, RNG]; *Davis 53484*, Agadir, 2–10 m, 18 Mar. 1972 [RNG]; *Lewalle 13958*, Cap Rhir, 30 Apr. 1994 [AD]; *Maire & Wilczek s.n.*, in arenosis ad oustium fluminis Sous, 2 Apr. 1934 [P]; *Podlech 45715*, Mündung des Oued Sous, Nordufer, ca. 10 m, 2 May 1989 [M]. – MAIRE (1939) also reported the species from W. Sahara (Rio de Oro).

- (8) Lotus creticus L., Sp. Pl.: 775 (1753). Lectotype (designated by Heyn & Herrnstadt 1968, Kew Bull 21: 307): Herb. Clifford No. 372.10 [BM-000646731!].
- = Lotus commutatus Guss., Fl. Sicul. Prodr. 2: 545 (1828–1832). Lectotype (designated by Heyn & Herrnstadt 1968, Kew Bull 21: 301): Gussone s.n., [Sicily], Trapani nell Isola del Ronciglio, Maggio [NAP].