

8 *Lithops fulviceps* (N.E. Br.) N.E. Br. (1914) (Y).

This yellow-flowering species is characterized by the raised pellucid dots on the face, and is one of the easiest to identify. Two varieties are recognized, var. *fulviceps* and var. *lactinea* Cole. There is also a white-flowering yellow-green cultivar whose habitat source is still unknown.

8.1 *Lithops fulviceps* (N.E. Br.) N.E. Br. var. *fulviceps* (Y). Plate 3/3-4.

COLLECTED by Professor H.H.W. Pearson in 1912. Latin *fulvi-* "yellow-brown, tawny", *-ceps* "head".

DISTRIBUTION: SWA/Namibia, in a narrow strip extending northwards for about 100 km from the vicinity of Karasburg, the type locality at Narudas being near the northern end of this area; and an isolated locality (as far as is known at present) near Lutzputs, Cape Province, over 180 km ESE from Karasburg. Westerly localities reported to the NE and SW of Klein Karas have not yet been confirmed.

DESCRIPTION: A very distinctive species, somewhat variable in colour, and by no means always tawny, but otherwise relatively uniform. **Profile** truncate, flat to slightly convex; fissure shallow, 5-8 mm, lobes conjunct. **Face** flush; mostly \pm reniform; lobes \pm unequal; mostly opaque; slightly rugose. **Margins, windows, channels and islands** generally absent or obscure. **Markings** on the face, few to many, very slender and irregularly branched, slightly impressed lines which are often indistinct but sometimes form a conspicuous network. **Pellucid dots**, up to 1,0 mm \varnothing and slightly raised like miniature blisters, scattered irregularly over the whole face (sometimes extending even over onto the shoulders), and occasionally so numerous as to flow together and produce the semblance of a window.

Colours: Face apparently opaque, fairly uniformly rusty yellow-brown to red-brown or grey-brown, sometimes grey with greenish or pinkish tinges, while the margins, though obscure, may occasionally manifest a slightly deeper hue. Markings yellow to orange-brown to red. Pellucid dots dark grey-green to blue-green. Shoulders bluish, reddish or yellowish grey.

Size: Medium to large, up to 40 x 27 mm, mostly about 30 x 23 mm. Number of heads up to 10 or more, mostly 2-3.

FLOWERS yellow, medium, up to 35 mm \varnothing , mostly 25-30 mm \varnothing . **Seed capsules** usually 5-merous (90%), otherwise (10%) mostly 6-merous. Profile boat-shaped, top flat to slightly convex; face broadly elliptic to elliptic, up to 12,0 x 9,0 mm, mostly about 8,5 x 7,0 mm.

8.2 *Lithops fulviceps* var. *lactinea* Cole (1973)(Y). Plate 3/5.

COLLECTED by D.T. & N.A. Cole on 2 July 1971. Latin *lactinea* "milky, bluish white".

DISTRIBUTION: SWA/Namibia, about 105 km ESE of Keetmanshoop and therefore over 35 km to the NNE of the main area of the type variety. Only one colony is known at present, growing on a gentle limestone slope.

DESCRIPTION: Except in colour, essentially as for the type. **Colour** of face opaque milky bluish or greenish or pinkish grey-white or grey; markings yellowish or reddish, the lines irregularly branched, sometimes barely visible; pellucid dots raised, mainly bluish green; shoulders milky grey-white, or bluish grey-white.

Size: As for the type or a little larger. Number of heads rarely more than 4, mostly 1-2.

FLOWERS as for the type or a little smaller. **Seed capsules** as for the type, or a little larger; mostly 5-merous (75%), otherwise (25%) usually 6-merous.

8.3 *Lithops fulviceps* cv. *Aurea* (W). Plate 3/6.

This albinistic cultivar has appeared in cultivation in the United States of America and in Japan, but its source in habitat is not known. It was published in 1977 as *L. fulviceps* f. *aurea* Y. Shimada. Latin *aurea* "golden yellow".

DISTRIBUTION: Unknown.

DESCRIPTION: As for the type, but the **face** opaque creamy yellowish green, sometimes with the vague semblance of a translucent grey-green window, and with obscure margins paler yellowish; the irregularly branched but often barely perceptible lines golden yellow; the raised pellucid dots bluish green; and shoulders milky greenish or bluish grey.

FLOWERS white, otherwise as for the type, or a little smaller. **Seed capsules** as for the type, or a little smaller; mostly 5-merous (80%), otherwise (20%) 6-merous.

9 *Lithops gesineae* De Boer (1955) (Y).

Two fairly similar varieties are included within this species, var. *gesineae* and var. *anna* (De Boer) Cole.

9.1 *Lithops gesineae* De Boer var. *gesineae* (1955) (Y). Plate 4/3-4.

COLLECTED by Franz S. Erni in 1938, and again in 1952 (after World War II) by his son, Herbert F.J. Erni (See Cole 1973a: 60, under **Namtipbergensis*); named for Mrs Gesine de Boer-Weyer, wife of Dr H.W. de Boer.

DISTRIBUTION: SWA/Namibia, at only two known localities in the Namtibberg, to the north of Aus.

DESCRIPTION: Relatively uniform and fairly easy to identify. **Profile** truncate to cordate, usually distinctly convex; fissure 6-12 mm deep, lobes conjunct, often

slightly divergent at the top. **Face** flush to slightly elevated, elliptic to slightly reniform; lobes \pm equal; opaque + translucent; smooth. **Margins** distinct but very irregular, with numerous fairly bold peninsular projections into the **windows** which are rarely open, usually partly occluded by islands and peninsulas. **Channels** translucent, narrow to broad, very irregular, often reduced to small spots (miniature windows) in the islands and margins, sometimes extending over onto the shoulders; these miniature windows often resemble, but must be distinguished from pellucid dots. **Islands** small to large, mostly very irregular in shape, with a filigree pattern produced by the miniature windows within them. **Markings** absent, or very rarely, a few vague brownish lines in the channels near the inner margins, but these visible only with a lens. **Pellucid dots** subcutaneous, few to many, scattered over both opaque and translucent areas, but mostly visible only with a lens.

Colours: Margins, peninsulas, islands, opaque beige or yellowish, greenish or pinkish grey. Windows/channels translucent grey-green. Pellucid dots deeper grey-green. Shoulders pale greenish or pinkish or yellowish grey.

Size: Small to medium, up to 36 x 27 mm, mostly about 28 x 18 mm. Number of heads up to 10, mostly 1-2.

FLOWERS yellow, medium to large, up to 45 mm \varnothing , mostly 25-35 mm \varnothing . **Seed capsules** mostly 6-merous (76%) or 5-merous (15%), otherwise (9%) mostly 7-merous. Profile boat-shaped, top flat to slightly convex, face broadly elliptic to elliptic, up to 10,0 x 8,5 mm, mostly about 7,5 x 7,0 mm.

9.2 *Lithops gesineae* var. *annae* (De Boer) Cole (1956) (Y). Plate 4/5-6.

COLLECTED by Herbert F.J. Erni in 1952, and again by Dr and Mrs A.L. Geyer in May 1956 (See Cole 1973a: 53, under **Herbertii*); named for Mrs Anna E. Geyer-Joubert.

DISTRIBUTION: SWA/Namibia, at only two known localities, SW and SE of Helmeringhausen.

DESCRIPTION: Superficially similar in many respects to the type variety, but usually fairly easily distinguishable. **Profile** truncate, flat to slightly convex; fissure 6-12 mm deep, lobes conjunct, sometimes slightly divergent at the top. **Face** flush; \pm elliptic; lobes \pm equal; opaque + translucent; slightly rugose. **Margins** often indistinct or irregular with numerous small indentations. **Windows** usually occluded by numerous islands and peninsulas; therefore reduced to a number of very slightly impressed irregular **channels**, broad to narrow, and occasionally further reduced to a network of shallow furrows. **Islands** usually distinct, small to large, mostly irregular in shape. **Markings** sometimes absent, sometimes a network of fine lines in the channels, frequently obscure

and barely visible without a lens, but often a distinct line along the inner margin, and numerous lines tapering off digitately into the outer margins and occasionally even over onto the shoulders. **Pellucid dots** subcutaneous, usually numerous, scattered irregularly over the whole face, opaque and translucent areas alike, and often at the ends of the digitate markings in the margins.

Colours: Margins and islands, various shades of opaque pale greenish, yellowish, pinkish or brownish grey, the margins occasionally obscurely banded in a slightly deeper hue. Channels, various shades of translucent grey-green or brownish or reddish green. Markings orange-brown to reddish. Pellucid dots dark grey-green. Shoulders as for the margins, or a little lighter.

Size: Medium to large, up to 40 x 30 mm, mostly about 30 x 20 mm. Number of heads seldom more than 1, occasionally 2.

Flowers yellow, large, up to 48 mm \varnothing , mostly 30-40 mm \varnothing . **Seed capsules** mostly 6-merous (75%) or 5-merous (11%), the remainder (14%) mostly 7- or 8-merous. Profile boat-shaped, top flat to slightly convex; face broadly elliptic, up to 12,0 x 10,0 mm, mostly about 10,0 x 8,5 mm.

10 *Lithops gracilidelineata* Dint. (1928) (Y).

There are two varieties of this relatively easily identifiable species, var. *gracilidelineata* and var. *waldroniae*.

10.1 *Lithops gracilidelineata* Dint. var. *gracilidelineata* (Y). Plate 5/1-3.

COLLECTED by Ernst J. Rusch in August 1927. Latin *gracili-* "finely, slenderly", *delineata* "drawn, marked, lined".

DISTRIBUTION: SWA/Namibia, in a long narrow quadrilateral area bounded approximately by points about 60 km SE and 120 km E of Swakopmund in the S, Sesfontein in the NW and Outjo in the NE. Type locality between Uis and Nainais, SE of the Brandberg. The localities reported near Sesfontein and Outjo have not yet been confirmed.

DESCRIPTION: Relatively uniform. **Profile** truncate, usually somewhat convex, occasionally flat; fissure shallow, 4-7 mm deep, lobes conjunct. **Face** flush; round to mostly elliptic; lobes \pm equal; opaque; usually distinctly rugose, occasionally smooth. **Margins, windows, channels, islands**, absent or very obscure. **Markings** manifest as a coarse or fine network of distinct but very slender lines which may be superficial and then the face is smooth; or, typically, somewhat impressed and set in a system of irregularly interconnected **valleys**, so that the face is divided into a number of humps, therefore distinctly rugose. Sometimes the markings are reduced to a number of fine broken lines, dashes or dots, or, rarely, they may be completely absent.