

***Maronea afroalpina* Brusse, sp. nov.**

Thallus crustosus, basalticola, albidus, ad 20 mm diametro, 0,1–1,0 mm crassus, rimoso-areolatus. *Areolae* 0,1–1,8 mm diametro. *Prothallus* non visus. *Cortex superior* 15–25 μm crassus. *Stratum gonidiale* 30–70 μm crassum; algae *Protococcoideae*, 5–11 μm diametro. *Medulla* alba, 60–900 μm crassa. *Apothecia* nigella, sessilia, ad 1,5 mm diametro, lecideina, marginibus pallide brunneis vel atrobunneis, discis atris pruina alba tectis. *Excipulum* inferne 40–50 μm crassum, in lateribus 50–70 μm crassum, interne hyalinum vel stramineum, externe brunneum, radiatim paraplectenchymatum, cellulis 3–7 μm diametro, interdum elongatis et usque ad 14 μm longis. *Hypothecium* stramineum, 50–100 μm crassum, paraplectenchymatum, cellulis 3–6 μm diametro. *Hymenium* fertile 70–95 μm altum, hyalinum; epihymenium brunneum. *Paraphyses* simplices sed apices versus ramosae, septatae, 1,3–1,7 μm crassae, capitatae, capitibus 2,8–5,2 μm crassis, brunneis. *Asci* clavati vel acuminate clavati, tholis J+ caeruleis. *Ascospores* numerosae ($\pm$ 100 vel ultra), simplices, hyalinae, ellipsoideae, parvae, 5–9 $\times$ 3,2–5,2 μm . *Pycnidia* non visa. *Thallus* acidum divaricatum solum continens.

TYPE.—2828 (Bethlehem): 31 km S of Phuthaditjhaba (Witsieshoek), summit of Western Buttress (Mont-aux-Sources), on vertical S face of basalt boulder outcrop on gentle S slope, alt. 3 080 m (–DB). *F. Brusse* 5553, 1988.04.05 (PRE, holo.; BM, LD, iso.). Figure 12.

Thallus crustose, basalticolous, whitish, to 20 mm diam., 0,1–1,0 mm thick, rimose-areolate. *Areoles* 0,1–1,8 mm diam. *Prothallus* not seen. *Upper cortex* 15–25 μm thick. *Algal layer* 30–70 μm thick; algae *Protococcoid*, 5–11 μm diam. *Medulla* white, 60–900

μm thick. *Apothecia* blackish, sessile, to 1,5 mm diam., lecideine; margins light to dark brown, discs black with white pruina. *Exciple* 40–50 μm thick below, 50–70 μm thick on sides, hyaline to stramineous within, brown towards exterior, radiately paraplectenchymatous, cells 3–7 μm diam., sometimes becoming 14 μm long. *Hypothecium* stramineous, 50–100 μm thick, paraplectenchymatous, cells 3–6 μm diam. *Hymenium* 70–95 μm high when fertile, hyaline; epihymenium brown. *Paraphyses* simple but branched towards apex (Figure 13), septate, 1,3–1,7 μm thick, capitate, heads 2,8–5,2 μm thick, brown. *Asci* clavate

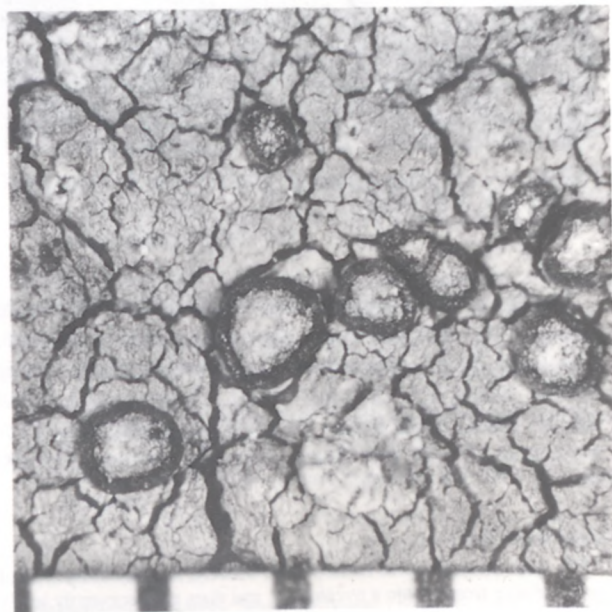


FIGURE 12.—*Maronea afroalpina* Brusse, habit. *F. Brusse* 5553, holotype. Scale in mm.

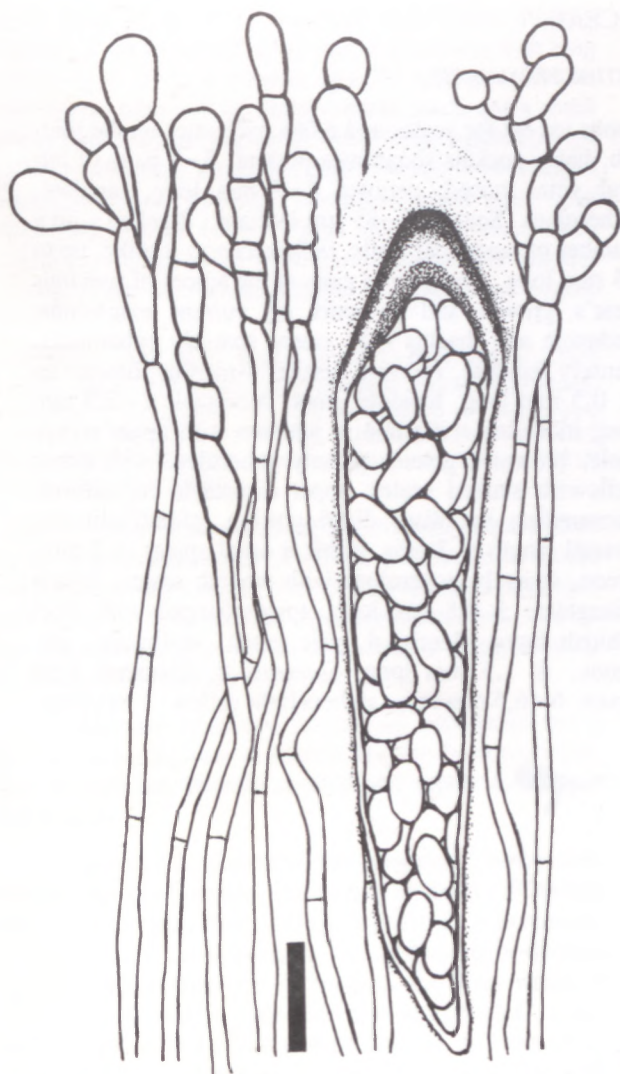


FIGURE 13.—*Maronea afroalpina* Brusse, ascus and paraphyses. The heavy lines at the tips of the paraphyses indicate brown walls. Stippling indicates the reaction in Lugol's iodine solution. F. Brusse 5553, holotype. Bar = 10 μ m.

or acuminate-clavate, tholus J+ blue (Figure 13). *Ascospores* numerous (± 100 or more), simple, hyaline, ellipsoid, small, $5-9 \times 3,2-5,2 \mu$ m. *Pycnidia* not seen. *Chemistry*: divaricatic acid only.

This is a unique new species of *Maronea*, because the apothecia are lecideine and the thallus is saxicolous, whereas all other species of *Maronea* known up to now have lecanorine apothecia and are corticolous. The lecanorine condition is characterized by a very reduced proper exciple and a well developed thalline exciple, not always in a protruded state. Oberhollenzer & Wirth (1984) treated several types of exciples in a single octosporous genus, *Fuscidea* V. Wirth & Vězda. The species with sunken apothecia and reduced exciples could be considered to have lecanorine apothecia, e.g. *Fuscidea atlantica* (Magn.) James & Poelt, originally described as a *Lecanora*. In a similar vein, Hertel (1984) has treated several lichens with *Lecanora*-type ascus apices, and curved acrogenous pycnidiospores with lecideine exciples, as species of *Lecanora* rather than of *Lecidea*, as would have been done in the past. The creation of a new genus for this lichen, therefore, seemed unwarranted.

Under the old system of classification of lichens, this species would key out at *Sarcogyne* Fw. (Magnusson 1935; Poelt 1969; Zahlbruckner 1926), but this genus often has a poorly developed thallus (mostly cryptothal-line), and the exciple is of a different structure and is dark brown to carbonized in colour. The paraphyses in *Sarcogyne* are ecapitate and strongly gelled, unlike the loose capitate paraphyses of *Maronea afroalpina*, and *M. constans* (Nyl.) Hepp, the type of *Maronea* (Hafellner 1984).

The major difference, the one which places *Sarcogyne* and *Maronea* in two different families, is the ascus apex, which is amply illustrated in Figure 2 and by Hafellner (1984) for *Maronea*, and by Brusse (1987, 1988) for the *Acarosporaceae*, of which *Sarcogyne* is a typical member.

It is as well to state here, that several species of *Maronea* [section *Pseudomaronea* (Müll. Arg.) Magn.], treated by Magnusson (1934), such as *Lecanora crassilabra* Müll. Arg., have *Lecanora*-type ascus apices, and are not true *Maronea* species.

Maronea afroalpina Brusse is presently known only from high altitudes in the Drakensberg, at Mont-aux-Sources.

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F. BRUSSE