The species described here is readily distinguished from all other *Coniothyrium* species having roughened surfaces on examination by optical microscopy, by its rather smaller spores. The spore dimensions of *Coniothyrium* species having an uneven spore surface so far described are as follows: *C. onychiuri* Punithalingam 3–4 × 2–3·5 μm; *C. minitans* Campbell 4–6 × 3·5–5 μm, *C. sarcinellae* Sahni 8–10 × (4–) 5–6 (–7) μm.

REFERENCES

CAMPBELL, W. A. (1947). A new species of *Coniothyrium* parasitic on sclerotia. *Mycologia*, **39**, 190–195.

PUNITHALINGAM, E. & JONES, D. (1970). Spore surface ornamentation in *Coniothyrium* species. *Trans. Br. mycol. Soc.* (in the Press).

SAHNI, V. P. (1968). Deuteromycetes from Jabalpur. III. *Mycopath. Mycol. appl.* **36**, 267–288.

CONCERNING *ROLLANDINA*

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The genus *Rollandina* was proposed by Patouillard (1905) with the following diagnosis. 'Receptaculum determinatum ex hyphis septatis, ramosis, pannoso-contextis formatum. Asci suboctospori, ovoideo-globosi, minuti, hyalini, dense glomerati; glomeruli numerosi, sparsi, noduliformes, trama undique obvoluti, sporae hyalinae'. The type specimen in Herb. FH was re-examined by R. K. Benjamin in 1956, and another re-examination by Apinis (1968) revealed that the structure of the 'stalk' (receptaculum) and cup-like expanded 'subiculum' is dissimilar to the fungus forming the loosely interwoven hyphal web covering that 'subiculum' in which the ascomata are embedded. This indicates that the 'stalk' and the 'subiculum' belong to another fungus. Because of this the generic characters of *Rollandina* are amended as Ascomata globosa, mollis, plus minusve hyalina, minuta, superficialia, solitaria vel aggregata. Hyphae peridii anastomosae, hyalinae, septatae, reticulatae, ad septae plus minusve constrictae et minutae asperulatae; appendicae absentibus vel simplex. Asci hyalini, vel luteo-punicei, globosi vel ovati, 2–8 spori, evanidi. Ascospori continui, hyalini vel dilute colorati. Conidia absentibus vel type *Chrysosporii*, *Microsporii* vel *Oidii*. Typus: *R. capitata* Patouillard emend. Ascomata albida, 150–300 μm crassa; asci ovoideo globosi, tenuiter tunicati, sessili, 2–4–8 spori, 8 × 6 μm; ascospori lentiformi, levi, circulariter canaliculati, 3·0–4·5 × 1·5–2·5 μm. Hab. ad quisquilas prope Bau-hau in regione Cai-Kinh, Tonkini, L. Boutan 341 (FH).

Similar isolates, possessing a simple, reticulate peridium consisting of hyaline, anastomozing delicately rough-walled hyphae, somewhat constricted at the septa, have been encountered on several occasions. Such soil isolates do not form any spiral appendages or dumb-bell-shaped cells in peridial hyphae but may possess simple, more or less radiating ends pro-

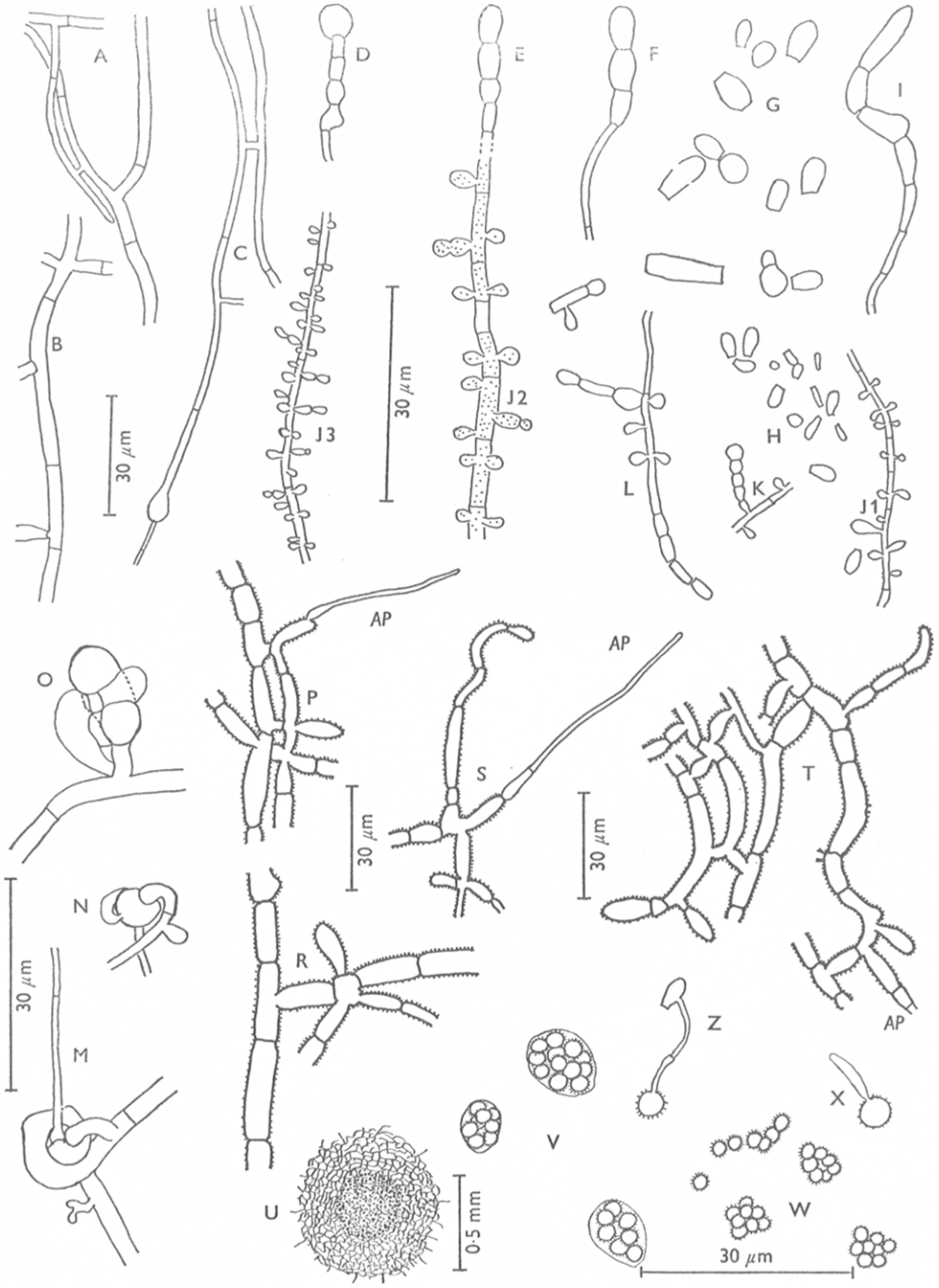

Fig. 1 A–Z. *Rollandina vriesii*. A–C, hyphae of the mycelium; D–G, I, K, L, terminal conidia of *Oidium* type; J (1–3), H, the common conidia of *Sporotrichum* type; M, N, O, initials of ascomata; P, R, S, T, peridial hyphae with the short, smooth appendage-like ends (*AP*); U, ascocarp at a low magnification with the central nucleus containing asci; V, asci; W, clusters of ascospores; X, germinating ascospore; Z, germinating ascospore and conidium.

truding beyond the outer layer of the fenestrate ascomatal envelope which otherwise is strongly reminiscent of that in *Arthroderma*. Thus the structure of the peridium bears great resemblance to certain genera and species in the Arachnoideae and Arthrodermoideae (Apinis, 1964). In regard to the former subfamily of the Gymnoascaceae, it is obvious that *Arachniotus lanatus* previously described in 1833 by F. G. Wallroth as *Sporotrichum lanatum*, is closely related to *Rollandina capitata*. It is therefore transferred as **Rollandina lanata** (Apinis) comb.nov. (Basionym *Arachniotus lanatus* Apinis, *Mycol. Pap.* **96**, 39, 1964).

In the subfamily Arthrodermoidae certain species of other genera than *Rollandina* show a true, close relationship in regard to ascocarp structure, ascospores and type of asexual reproduction. This is especially so with *Gymnoascus ossicola* Rostrup (1897) which was transferred to the genus *Nannizzia* Stockdale by Apinis (1964) because of its arthrodermoid peridial structure. However, simplicity of its peridium does not correspond with that in the type species of either *Arthroderma* Berkeley or *Nannizzia*. Because of this *G. ossicola* Rostrup is placed in *Rollandina* as **R. ossicola** (Rostrup) comb.nov. (Basionym *Gymnoascus ossicola* Rostrup, *Bot. Tidskr.* **21**, 45, 1897).

In 1968 Dr G. A. de Vries, Baarn, sent to me a culture isolated from the skin and lungs of a lizard (*Ameiva* sp.). This isolate also possessed a simple, arthrodermoid peridium which appeared transitional in structure between certain Arachnoidae and Arthrodermoidae representatives. Again, in this isolate the structure of the peridium of the ascocarp was strikingly similar to that of *Rollandina*. However, the isolate was distinct from all three *Rollandina* species mentioned here and from any *Arthroderma* or *Nannizzia* species known to me. It is proposed to name it *Rollandina vriesii* sp.nov., in honour of the well known Dutch medical mycologist G. A. de Vries.

Rollandina vriesii sp.nov. (fig. 1 A–Z)

Mycelium album, floccosum; hyphae hyalinae, ramosae et anastomosae, septatae, (1·5)2–3(5) μm diam. Conidia continua, hyalina, globosa, ovata, cylindracea, vel piriformia et clavata, levia, 2–3–4 × 3–8 (10) μm, solitaria et plus minusve catenulata. Ascomata alba dein grisea vel luteo-alba, globosa, superficialia, solitaria vel aggregata, 0·3–1 mm. diam. Hyphae peridii hyalinae, anastomosae et ramosae, septatae, delicatae asperulatae, ad septae constrictae, 3–6 μm diam.; appendiculae simplex, levae, plus minusve rectae, hylinae. Asci aggregati, subglobosi et ovati, evanidi, plerumque octospori (et 16-spori), (5·6) 6–8 (5) μm diam. Ascospori globosi, continui primo hyalini dein dilute punicei, asperulati 2–3 μm diam.

Hab. ex cutis et pulmonis lacertorum, *Ameiva* species, G. A. de Vries, Baarn, Hollandia, no. D68/191; **IMI** 149994, typus.

This isolate grows better at 30 °C than at 25° (no growth at 37°) on malt extract agar, oatmeal agar, OAES agar (Ohio Agric. Exp. Stn agar) and even on dung and soil extract agar upon which it forms a cottony mycelium consisting of septate, hyaline, branched hyphae (Fig. 1 A–C) (1·5) 2–3 (5) μm diam; also racquet-like hyphae are produced. Numerous, variable, one-celled, hyaline, smooth, globose, oval, piriform or cylindical to clavate conidia are formed singly on vegetative hyphae of the *Sporo-*

trichum or *Chrysosporium* type, or in chains (*Oidium* type) 2–3 × 3–8 μm diam. Larger giant cells may be produced on soil extract agar and other media. The white to cream-coloured, soft, globose ascomata are produced superficially in small clusters upon OAES agar and oatmeal agar in 10–14 days reaching 0·3–1·0 mm diam (Fig. 1 U). They consist of a relatively thick (100–300 μm) more or less reticulate, hyaline peridium which is composed of loosely interwoven, anastomosed and branched, septate, delicately rough hyphae somewhat constricted at cross-walls (Fig. 1 P–T) forming a fenestrate cover of the globose, more compact, yellowish or more or less pink-brown coloured central part containing asci. Peridial hyphae are little differentiated and are more or less arthrodermoid but without any dumb-bell-shaped cells or spiral appendages. However, a few simple, smooth, more or less straight 50–100 (120) μm long appendage-like ends (Fig. 1 P, S) are formed. The evanescent, globose to ovate asci 6–8 (15) μm are usually eight-spored (Fig. 1 V), but also large sixteen-spored asci were seen, containing globose, hyaline (subsequently plus or minus pink-brownish colour), echinulate, one-celled ascospores (1·5) 2–3 (3·5) μm (Fig. 1 W).

Because of absence of dumb-bell-shaped and the true spiral appendages it differs from the complex structure of the peridium in *Apinisia* La Touche (1968), *Arthroderma* Berk, *Nannizzia* Stockd and *Shanorella* Benjamin but is closely related with the other three species of *Rollandina* Pat.

The morphological differences of the *Rollandina* species considered are as follows:

A. Ascospores more or less lenticular
   - *a.* Ascospores smooth with slightly elevated equatorial band, 3·0–4·5 × 1·5–2·5 μm diam. *R. capitata* Pat.
   - *b.* Yellow colony; ascospores smooth without an equatorial band and with one or both faces ± convex in a side view, 2·8–3·5 × 1·0–105 μm diam. *R. lanata* (Apinis) Apinis
   - *c.* White colony; ascospores slightly rough, lenticular, 2·0–3·5 × 1·0–1·5 μm diam. *R. ossicola* (Rostrup) Apinis.

B. Ascospores globose, echinulate, 2–3 μm diam. *R. vriesii* Apinis

REFERENCES

Apinis, A. E. (1964). Revision of British *Gymnoascaceae*. *Mycol. Pap.* 96, 1–56.

Apinis, A. E. (1968). Relationships of certain keratinophilic *Plectascales*. *Mycopath. Mycol. appl.* **35**, 97–104.

Benjamin, R. K. (1956). A new genus of the *Gymnoascaceae* with a review of the other genera. *Aliso* **3**, 301–328.

La Touche, C. J. (1968). *Apinisia graminicola* gen. et sp.nov. *Trans. Br. mycol. Soc.* **51**, 283–285.

Patouillard, M. N. (1905). *Rollandina*, nouveau genre de Gymnoascés. *Bull. Soc. mycol. Fr.* **21**, 81–83.

Rostrup, E. (1897). Mykologiske meddelelser. VII. *Bot. Tidsskr.* **21**, 37–49.