On some recent *Entoloma* records from New Zealand and Cook Islands

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Abstract: Eight *Entoloma* spp. collected in New Zealand and the Cook Islands are treated macro- and microscopically; microscopical drawings and colour plates of all species are given. One species, *E. lanceolatum*, and one variety, *E. viridomarginatum* var. *milfordense*, are described as new.

Zusammenfassung: Acht *Entoloma*-Arten, die in Neuseeland und auf den Cook Islands gesammelt wurden, werden makro- und mikroskopisch dokumentiert, sowie mit Mikrozeichnungen und Farbfotos dargestellt. Eine Art, *E. lanceolatum*, und eine Varietät, *E. viridomarginatum* var. *milfordense*, werden neu beschrieben.

During a stay of four weeks of the authors in New Zealand and of the second author subsequently on Rarotonga (Cook Islands) a greater number of macromycetes could be collected besides many impressions of incomparable beauty of nature. Among the specimens there were also several interesting *Entoloma* taxa. Thanks to a high number of publications by HORAK (e.g., HORAK 1971a, b, 1973, 1977, 1979, 1980a, b, 1990; DESJARDIN & HORAK 1994, 1997), the mycoflora of New Zealand is quite well known, but most of the species described have not yet been illustrated in colour. Thus, it seemed worthwhile to us to give a small insight into this exotic world of fungi and to fully document our finds.

***Entoloma aromaticum* HORAK 1973**, Nova Hedwigia **43**: 52 (Colour fig. XIV, Fig. 1a-c)

Characters:

Pileus: 12-27 mm broad, flat convex with indistinct to very flat umbo, young brown, pale brown, café-au-lait (KORNERUP & WANSCHER 1975: 6E4, 5E3-4), older café-au-lait to camel (6DE3-4) in the centre, paler towards the margin, up to reddish blond (5C4), hygrophanous, up to half of the pileus striate when moist; in the centre surface not completely smooth, but fine granular, margin smooth.

Lamellae: l = 1-3, sinuate, distance normal, slightly ventricose, pale greyish beige, later flesh-coloured, with concolorous, slightly crenated lamellar edge.

Stipe: 25-47 mm long, 2.5-3 mm thick, cylindrical, whitish to greyish beige, always much paler than the pileus, strongly longitudinally striate and fibrillose, hollow.

Context: smell and taste after several hours (not in fresh condition) intensely farinaceous-rancid.

Spores: 7.6-9.7 x 5.8-6.6(-7.5) µm, mean 8.7 x 6.2 µm, Q = 1.1-1.4, l-d = 0.6-3.2 µm, (4-)5-6-angular, thick-walled, subisodiametrical.

Basidia: 4-spored, clavate, 32-45 x 10-14 µm.

Clamp connections: absent at the base of the basidia as well as in the trama.

Cheilocystidia: absent. Lamellar edge fertile.

Lamellar trama: consisting of long, cylindrical, thin-walled hyphae.

Pileipellis: a cutis of 4-9 µm thick, long hyphae with purely intracellular, coarse, brownish pigment.

Habitat and distribution: terricole under Redwood and tree ferns. *Entoloma aromaticum* is known from several collections from New Zealand (HORAK 1973) and from New Caledonia (HORAK 1980, HORAK & MOUCHACCA 1998).

Collection examined: New Zealand: North Island, Rotorua, Whakarewarewa Forest, 7. 3. 1997, leg. A. HAUSKNECHT NZ 60 & G. WÖLFEL, det. E. HORAK (WU 18243, ZT 7118).

Notes: Our collection has slightly smaller spores than reported for the type collection by HORAK (1973). Further, the pileus is not so acute umbonate and a fruity-aromatic smell could not be recorded; however, HORAK (1973) definitely states that the smell of older carpophores can change to farinaceous.

In Europe two species are known with sweetish-aromatic smell, namely *Entoloma ameides* (BERK. & BROOME) SACC. and *E. sacchariolens* (ROMAGN.) NOORDEL. HORAK (1973) reports an astonishing variability especially of the microscopic characters (spore size, pigment, clamp connections), so that an exact delimitation of the two European species is hard. In a later publication HORAK (1980a: 171) notes „*E. aromaticum* is quite similar to *Rhodophyllus sacchariolens* which has been recently described from Europe .... Further research will reveal the relationship between the two species." The first author knows *E. sacchariolens* well and does not believe that it is more closely related to *E. aromaticum*.

***Entoloma atrellum* HORAK 1973**, Nova Hedwigia Beih. **43**: 65 (Colour fig. XV, Fig. 1 d-h)

Characters:

Pileus: 16-27 mm broad, even young flat convex with flat to slightly depressed centre, young violet brown, dark ruby (10F3-4, 11F3-4, 12F3-4), later with more brownish tinge, greyish violet brown (10F4) in the centre, grey brown (8F4, 8F3-4) towards the margin, completely covered with nearly black, appressed scales, centre black; only a bit hygrophanous, margin not or minimally pellucid-striate even when moist; margin young involute, smooth.

Lamellae: l = 1-3, slightly sinuate to slightly decurrent, distance normal, narrow; young white, later pink with greyish tinge, lamellar edge slightly violet to blackish blue, smooth.

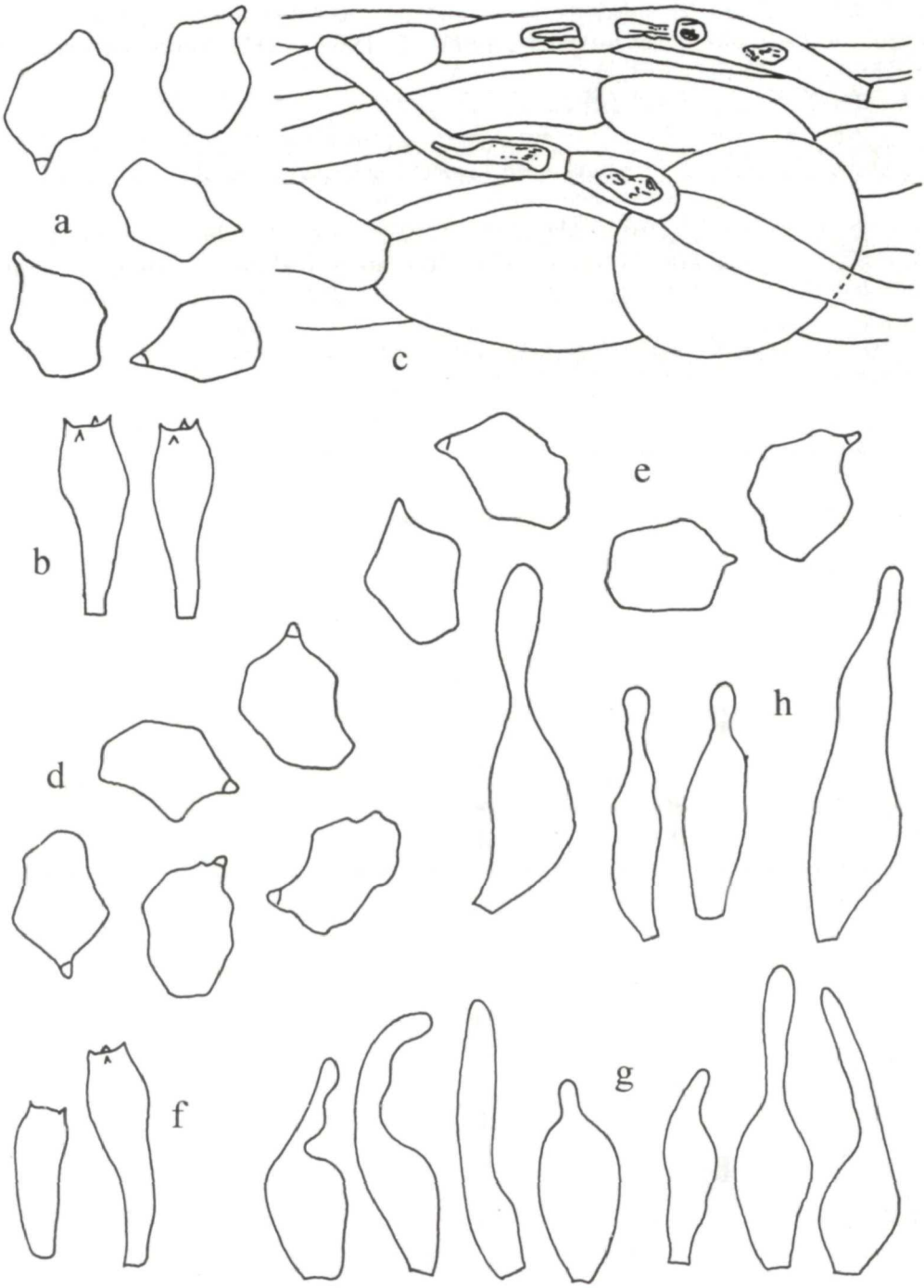

Fig. 1 *a-c Entoloma aromaticum* (WU 18243). *a* spores, x 2000; *b* basidia, x 800; *c* pileipellis, x 800. *d-h Entoloma atrellum* (*d, f, g* WU 18245, *e, h* 17492). *d, e* spores, x 2000; *f* basidia, x 800; *g, h* cheilocystidia, x 800.

Stipe: 20-30(-75) mm long, 2.5-5 mm thick, base often thicker; apex white, below dull whitish with violet to violet grey (18E2, 18E2-3, 18D2) fibrillose scales, base white, old yellowing; hollow.

Context: smell and taste indistinct.

Spores: 7.9-10.8 x 6-7.5 µm, mean (two collections) 9.1-9.3 x 6.6 µm, Q = 1.2-1.7, l-d = 1.4-4.5 µm, 5-6-angular, thick-walled, heterodiametrical.

Basidia: 4-spored, clavate, 26-38 x 9-11 µm.

Clamp connections: absent in the trama as well as at the base of the basidia.

Cheilocystidia: 30-68 x 9-20 µm, fusiform to phialiform with long, -7 µm thick beak and often rounded and slightly thickened at the apex. Lamellar edge heterogeneous.

Lamellar trama: regular, with many refringent granules.

Pileipellis: a trichoderm with fasciculated, erect terminal cells (these -150 µm long and 7-17 µm thick), with abundant intracellular, brownish violet pigment.

Habitat and distribution: in moss, on the ground in Redwood-forest (with many tree ferns) and on heavily moss-covered stem of a living Kauri. *Entoloma atrellum* seems to be rare and is hitherto only known from New Zealand.

Collections examined: New Zealand: North Island, Rotorua, Whakarewarewa Forest, 7. 3. 1997, leg. G. WÖLFEL E4/97 & A. HAUSKNECHT, det. E. HORAK (WU 17492, ZT 7121); - Westland, Waipoua Forest, 12. 3. 1997, leg. A. HAUSKNECHT NZ 76 & G. WÖLFEL, det. E. HORAK (WU 18245, ZT 7123).

Notes: The above macroscopical description is almost completely based on collection NZ 76.

As our two collections showed several macro- and microscopical differences, we first believed to have two different species in hand. Especially the almost smooth, only slightly fibrillose stipe of collection E4/97 was very conspicuous. Both collections had somewhat smaller spores in contrast to the original description (HORAK 1973); further small differences were found in the shape of the terminal cells of the pileipellis and the spores; but since HORAK (pers. comm.) determined both collections, these differences must still be seen as lying within the variability of one species. Perhaps new finds will provide hints if a possible differentiation - at the rank of variety at least - will be meaningful.

***Entoloma brunneolilacinum* HORAK 1973**, Nova Hedwigia Beih. **43**: 35 (Colour fig. XVI, Fig. 2 a-c)

Characters:

Pileus: 6-30 mm broad, young convex to semiglobose, indistinctly flattened to umbilicate in the centre, older campanulate to flat convex; young nearly blackish with purple brown tinge (8F1), older more brownish (8F3 in the centre, 8F2 at the margin); young and fresh completely fibrillose-shaggy, later more and more glabrous and then nearly smooth at the margin; only slightly hygrophanous, young not striate, old and watery pellucid-striate at the margin.

Lamellae: l = (1-)3, broadly adnate, sometimes decurrent with tooth, rarely slightly sinuate, young dirty whitish, beige, old fawn with slight red hue, lamellar edge smooth, concolorous.

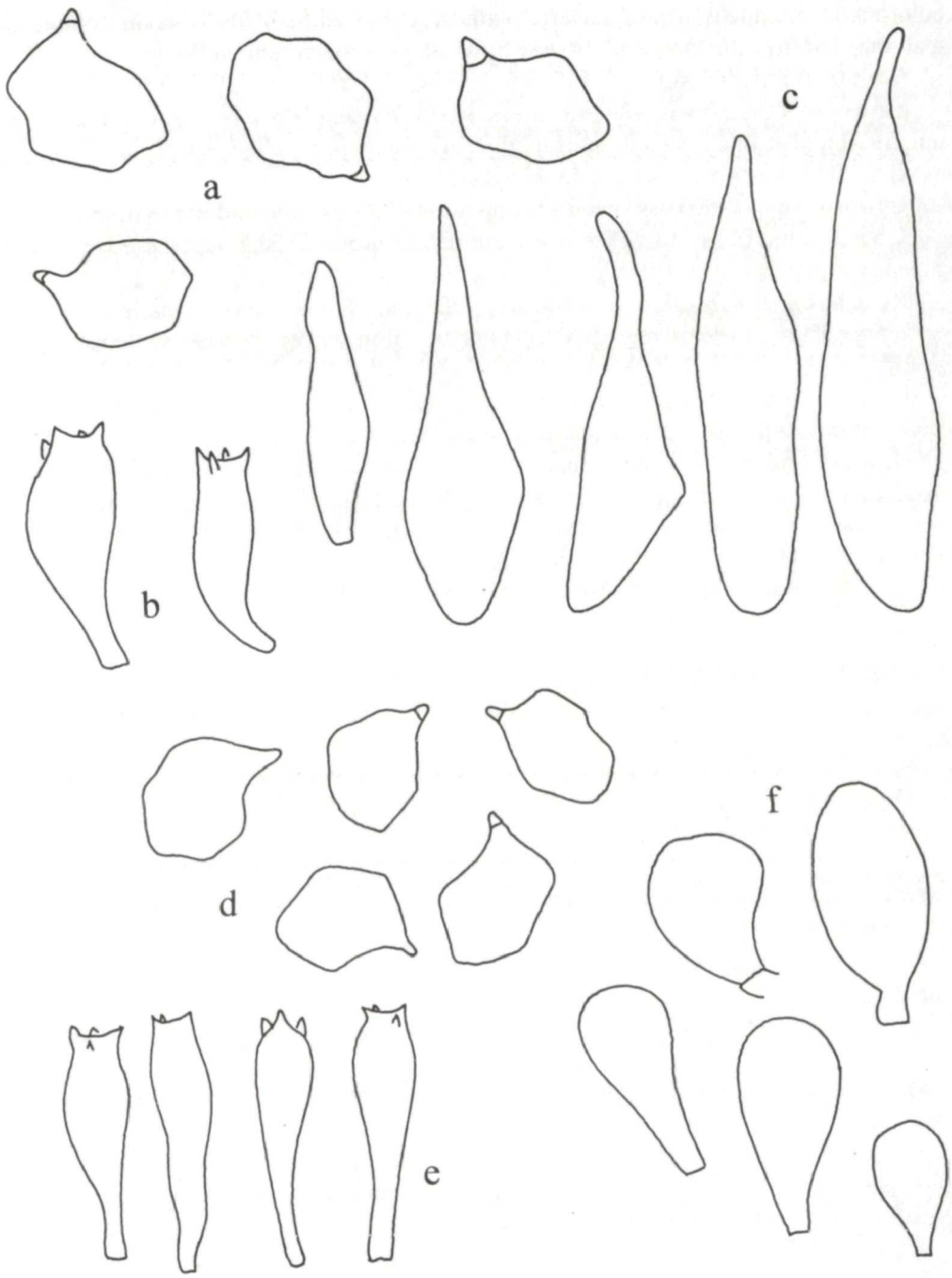

Fig. 2 *a-c Entoloma brunneolilacinum* (WU 17485). *a* spores, x 2000; *b* basidia, x 800; *c* cheilocystidia, x 800. *d-f Entoloma fuscum* (WU 18244). *d* spores, x 2000; *e* basidia, x 800; *f* cheilocystidia, x 800.

Stipe: 12-47 mm long, 1.5-4 mm thick, cylindrical, longitudinally sulcate, concolorous to the pileus, young covered with very fine whitish fibrils, soon completely glabrous and then like polished; base with weak, grey tomentum; hollow.

Context: smell none.

Spores: 9.0-12.0 x 6.4-8.9 µm, mean 10.0 x 7.7 µm, Q = 1.1-1.5, l-d = 1-2.4(-3.0) µm, 5-6-angular, thick-walled, indistinctly to distinctly heterodiametrical.

Basidia: 4-spored, clavate, 35-47 x 11-15 µm.

Clamp connections: present at the base of the basidia and in the trama.

Cheilocystidia: 50-115 x 10-27 µm, fusiform-lanceolate; lamellar edge heterogeneous.

Pleurocystidia: similar to cheilocystidia, but often somewhat smaller.

Lamellar trama: regular of cylindrical, thin-walled hyphae with refringent granules.

Pileipellis: a trichoderm with cylindrical to clavate terminal cells (-25 µm broad); pigment purely intracellular, coarse granular.

Habitat and distribution: Planted bed, along side of path to the ship-landing-place, on gravely soil, between mosses and lichens. The species seems to be up to now only known from southern New Zealand. According to HORAK (1973) the type collection was found under *Nothofagus* and *Leptospermum*.

Collection examined: New Zealand: South Island, Fjordland, Milford Sound, 22. 2. 1997, leg. G. WÖLFEL E1/97 & A. HAUSKNECHT (WU 17485, ZT 7126).

Notes: Apart from the habitat our collection is in good accordance with the type description (HORAK 1973). The small differences found are meaningless and lie within the variability of characters of one species.

Entoloma porphyrescens HORAK from New Zealand has similar colours as the species documented above, but there are clear differences in the size of the carpophores and the spores and in the shape of the cheilocystidia.

***Entoloma fuscum* (CLEL.) HORAK 1980**, Nova Hedwigia Beih. **65**: 238 (Colour fig. XVII, Fig. 2 d-f)

Characters:

Pileus: 10-18 mm broad, flat convex, old with slightly depressed, but indistinctly umbilicate centre; pale chocolate (6EF4) in the centre, otherwise brown, camel (6E4, 6D4), hygrophanous, but only indistinctly pellucid-striate; surface fine granular to fine scaly, margin involute, smooth.

Lamellae: l = 3, sinuate, distance normal, indistinctly ventricose, young beige grey, old brown with almost no pink tinge, lamellar edge smooth, slightly darker brown.

Stipe: 10-20 mm long, 1.5-3 mm thick, cylindrical or somewhat flattened, dark blond (5D4) in the upper part, distinctly paler towards the base, up to alabaster, pale orange grey (ca. 5B2-3), base with weak whitish tomentum; young surface fine pruinose, older smooth, like polished.

Context: smell and taste indistinct.

Spores: (8.1-)8.7-10.7 x 6.3-8.4 µm, mean 9.3 x 7.0 µm, Q = 1.2-1.35, l-d = 1.2-3.2 µm, simple, 5-6-angular, slightly heterodiametrical.

Basidia: 4-spored, remarkable narrowly clavate, 35-45 x 8-10 µm.

Clamp connections: absent.

Cheilocystidia: 35-50 x 12-21 µm, broadly clavate to nearly sphaeropedunculate. Lamellar edge sterile.

Lamellar trama: regular, consisting of long cylindrical, thin-walled hyphae with numerous refringent granules.

Pileipellis: a conspicuous trichoderm with clavate terminal cells (these -25 µm broad); with abundant, intracellular, brown pigment.

Habitat and distribution: along pathside under Kauri and *Podocarpus*, in moss. The species seems to be rather widely distributed. Finds are known from New Zealand (North and South Island), Australia, Solomon Islands and Papua New Guinea (HORAK 1980).

Collection examined: New Zealand: North Island, Northland, Russell, Ngaiotonga Russell Forest, 10. 3. 1997, leg. A. HAUSKNECHT NZ 67 & G. WÖLFEL, conf. E. HORAK (WU 18244, ZT 7128).

Notes: *Entoloma deceptivum* HORAK (HORAK 1973) is given as a synonym by HORAK (1980), although it has septa with clamp connections at the base of the cheilocystidia and in the pileipellis. These are absent in our find.

***Entoloma haastii* G. STEVENSON 1962**, Kew Bull. **16**: 229 (Colour fig. XVIII, Fig. 3 a, b)

Characters:

Pileus: 17-45 mm broad, already young flat conical to flat convex, soon flat convex or expanded, centre sometimes a bit depressed or with small, very flat umbo; dark brown (8F4, 8F3-4, 8F3) to blackish violet (margin dark ruby, darker than 12F3), one older carpophore in the centre black and with black, radial striae; hygrophanous but not pellucid-striate; surface weakly radially rugose to distinctly granular, margin of older carpophores heavily radially cracking.

Lamellae: l = 3-5, narrowly adnate, rather crowded, narrow, only slightly ventricose, young grey beige, soon brownish grey to almost blackish brown, blackening when bruised; lamellar edge crenate, first concolorous, older darker than lamellar side.

Stipe: 30-35 mm long, 2.5-5.5 mm thick, cylindrical with slightly thickened base, young partly greenish grey brown, soon grey brown to violet black, partly with greenish hue, towards base more distinctly turquoise brown to green brown, slightly fibrillose to pruinose at the apex; hollow.

Context: pale violet, violet brown, distinctly green in the stipe base, smell and taste indistinct.

Spores: 6.5-9.0 x 6.2-7.8 µm, mean 8.0 x 7.2 µm, Q = 1.0-1.2, l-d = 0-1.6 µm, 6-angular to many-angular-nodulose, thin-walled, isodiametrical, partly cyanophilous.

Basidia: 4-spored, slightly clavate to spherical-oblong, 25-45 x 10-14 µm.

Clamp connections: absent.

Cheilocystidia: absent.

Lamellar trama: regular consisting of inflated, thin-walled, 50-120 µm long and -35 µm broad hyphae.

Pileipellis: a cutis with distinct transition towards a trichoderm, with often fusiform acuminate terminal cells, abundant pigment mainly intracellular, brownish violet; additionally even weakly encrusted.

Habitat and distribution: in *Nothofagus*-forest; rather frequent in New Zealand; according to HORAK (1978) and HORAK & MOUCHACCA (1998) this species also occurs in New Caledonia and in Chile below *Fagaceae*.

Collection examined: New Zealand: South Island, Fjordland, Milford Sound, The Chasm, 22. 2. 1997, leg. A. HAUSKNECHT NZ 9 & G. WÖLFEL, det. E. HORAK (WU 18241, ZT 7125).

Notes: Already in the first description STEVENSON (1962) refers to the close relationship of *E. haastii* to „*Rhodophyllus nitidus* QUÉL.". For some time HORAK (1980: 277) considered them to be conspecific. Later he changed his opinion (HORAK & MOUCHACCA 1998: 89). We know the European *Entoloma nitidum* QUÉL. of numerous collections and it would never have come to our mind to consider the find from New Zealand as conspecific. Apart from great macroscopic differences (colour, blackening when bruised, green base of stipe, pileus surface), which eventually were especially evident in our very fresh collection, there are also distinct microscopical differences (construction and pigment of pileipellis, cyanophilous spores).

***Entoloma lanceolatum* WÖLFEL & HAUSKNECHT, spec. nova** (Colour fig. XIX, Fig. 3 c-g)

Descriptio latina:

Pileus 5-12 mm latus, plane convexus, centro depresso, albus, albidus, pallide cremeus, aurantio-albus (5A2-3) in statu humido, non hygrophanus, estriatus, superficies omnino appresse fibrillo-tomentosa, margo involutus, glaber. Lamellae l = 3, subdecurrentes ad late adnatae, incrassatae, distancia normalis, primum albae, demum cremeo-carneae, non griseo- vel brunneotinctae, acies lamellarum concolor, glabra. Stipes 7-13 mm longus, 1-1,5 mm latus, cylindricus, candidus, sub lente subtiliter tomentoso-fibrillosus, apex subtiliter pruinosus, alio modo glaber, cavus. Caro alba, tenuis, inodora et insipida.

Sporae 10,3-13,7 x 7,6-9,6 µm, in medio 11,0 x 8,1 µm, Q = 1,2-1,6, l-d = 1,4-4,8 µm, crasse tunicatae, 6-8(-10)-angulares, heterodiametricae; basidia tetraspora, clavata ad cylindrico-clavata, 22-45 x 10-14 µm; fibulae basi basidiorum praesentes; cheilocystidia 25-60 x 6-15 µm, partim pauce, lanceolata, phialiformia, acuminata, saepe septata, trama lamellarum regularis hyphis longis tenuibus consistens; caulocystidia 20-45 x 5-13 µm, distincte lanceolata ad phialiformia, saepe praecipue apice stipitis fasciculata; pileocutis caulocystidiis lanceolatis, pigmentum absens; in graminosis.

Holotypus: Cook Islands: Rarotonga, Muri Beach, 19. 3. 1997, in the grass on sandy soil, leg. A. HAUSKNECHT CK01 (WU 18246; isotype in ZT 7120).

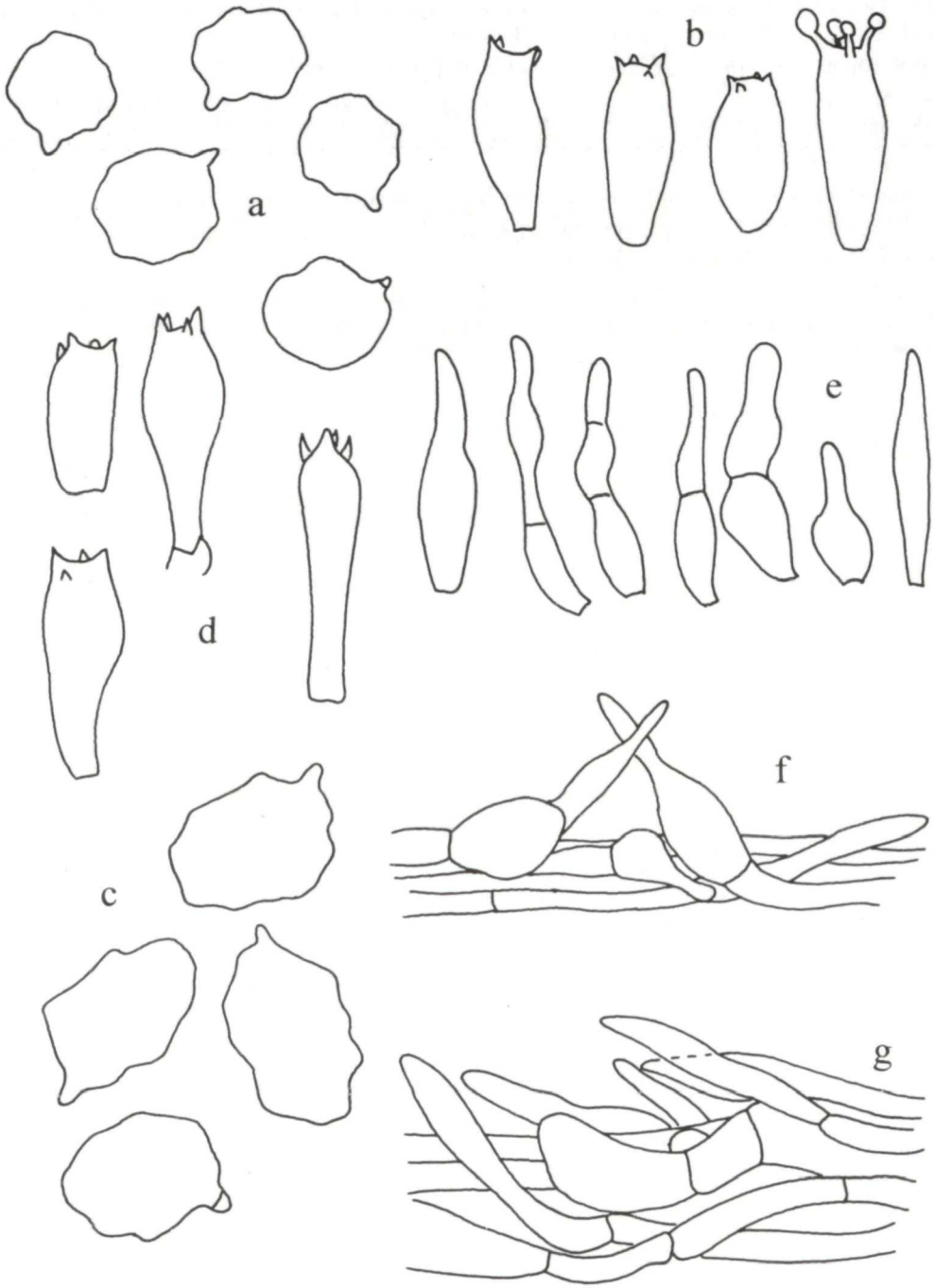

Fig. 3 *a*, *b Entoloma haastii (*WU 18241). *a* spores, x 2000; *b* basidia, x 800. *c-g Entoloma lanceolatum* (holotype, WU 18246). *c* spores, x 2000; *d* basidia, x 800; *e* cheilocystidia, x 800; *f* caulocystidia, x 800; *g* pileipellis with lanceolate terminal cells, x 800.

Characters:

Pileus: 5-12 mm broad, flat convex with slightly depressed centre, white to whitish, pale cream, up to orange white (5A2-3) when moist; not hygrophanous, not striate, surface completely appressed felty-fibrillose, margin involute, smooth.

Lamellae: l = 3, slightly decurrent to very broadly adnate, thickish, distance normal, young white, then cream-flesh, no grey or brown tinge, lamellar edge concolorous, smooth.

Stipe: 7-13 mm long, 1-1.5 mm thick, cylindrical, pure white, under lens fine felty-fibrillose and fine pruinose at the apex, otherwise smooth; hollow.

Context: white, thin, smell and taste indistinct.

Spores: 10.3-13.7 x 7.6-9.6 µm, mean 11.0 x 8.1 µm, Q = 1.2-1.6, l-d = 1.4-4.8 µm, thick-walled, 6-8(-10)-angular with distinct edges, heterodiametrical.

Basidia: 4-spored, clavate to cylindrical-clavate, 22-45 x 10-14 µm.

Clamp connections: found only at the base of the basidia.

Cheilocystidia: 25-60 x 6-15 µm, sometimes very rare, lanceolate, slightly phialiform to nettle-hair-shaped, with acute to rounded apex, often septate.

Lamellar trama: regular, consisting of thin, long hyphae.

Caulocystidia: 20-45 x 5-13 µm, distinctly lanceolate to phialiform, often in fascicles especially on the stipe apex.

Pileipellis: a cutis with trichoderm-like erect terminal cells, these similar to the caulocystidia acute lanceolate. No pigment found.

Habitat: in the green of a hotel.

Collection examined (besides type): **Cook Islands:** Rarotonga, Muri Beach, 22. 3. 1997, leg. A. HAUSKNECHT (WU 19137).

Notes: *Entoloma lanceolatum* is characterised by omphaloid habit, white, non hygrophanous pileus, heterodiametrical, thick-walled, many-angular spores and lanceolate cheilo-, pileo- and caulocystidia. *Entoloma bombycinum* CORNER & HORAK is somewhat similar, but differs by other spores and especially by the peculiar cystidia.

***Entoloma phaeomarginatum* HORAK 1973**, Nova Hedwigia Beih. **43**: 70 (Colour fig. XX, Fig. 4 a-c)

Characters:

Pileus: 8-30 mm broad, semiglobose-convex, only slightly depressed in the centre, centre almost black, brown black, dark brown towards the margin (7F4, 7F3), older altogether slightly paler, pale chocolate (6EF4); hygrophanous, up to ¾ striate when wet (after heavier rain fall); coarse, squarrose scaly in the centre, otherwise radially striped and slightly crenate similar to some *Coprinus* spp.

Lamellae: l = 1-5, broad adnate, with tooth decurrent, slightly distant, ventricose; young beige with greyish tinge, then brick red, finally red brown, lamellar edge brown ciliate.

Stipe: 15-30 mm long, 1.5-2.5 mm thick, cylindrical, pale brown to brown (5-6 D4, 5-6E4), completely smooth, like polished, base with white tomentum, not changing in colour; partly contorted, stiff, hollow.

Context: smell and taste indistinct.

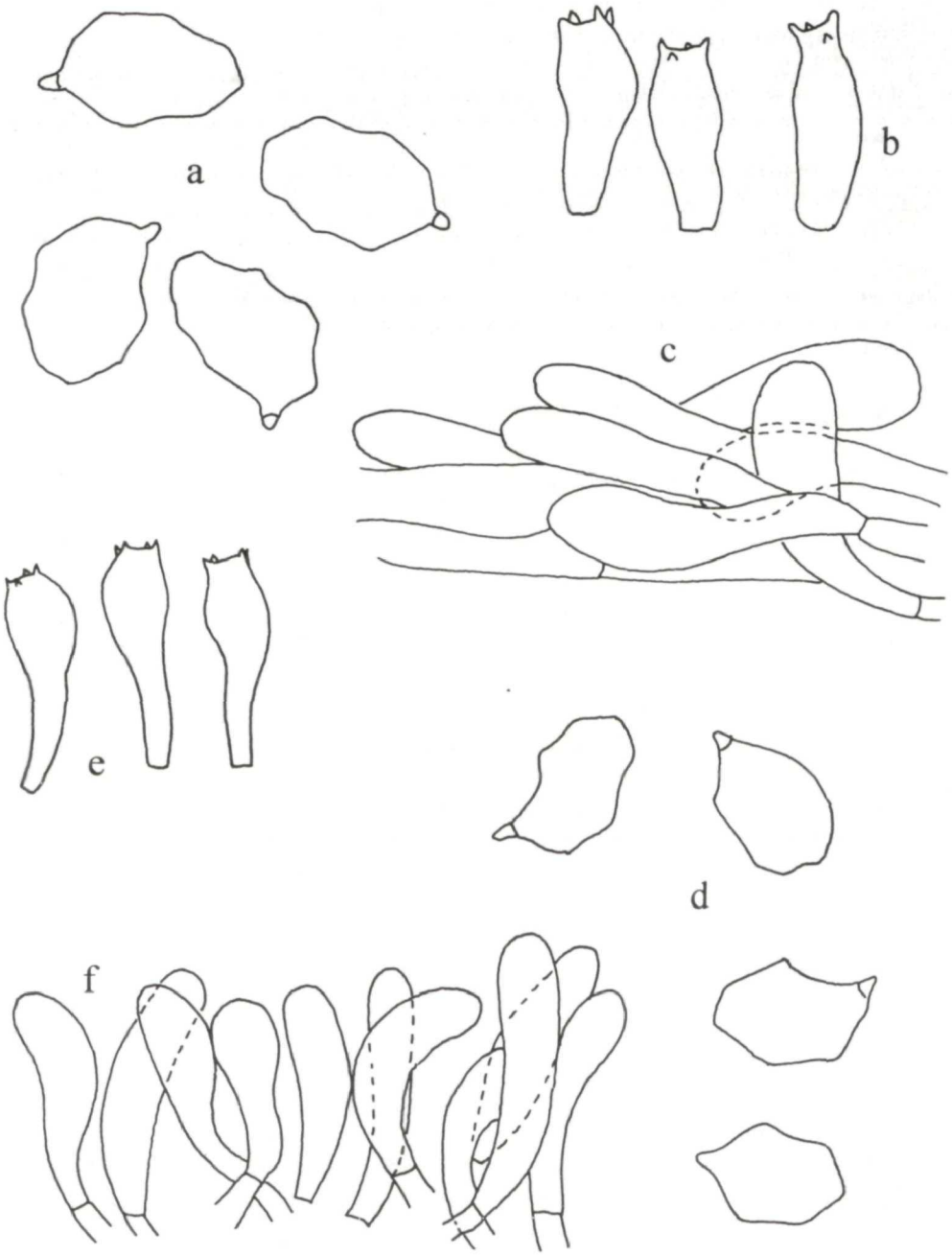

Fig. 4 *a-c Entoloma phaeomarginatum* (WU 18239). *a* spores, x 2000; *b* basidia, x 800; *c* pileipellis, x 800. *d-f Entoloma viridomarginatum* var. *milfordense* (holotype, WU 17483). *d* spores, x 2000; *e* basidia, x 800; *f* cheilocystidia, x 800.

Spores: 10.6-13.3 x 6.8-8.3 µm, mean 11.9 x 7.6 µm, Q = 1.3-1.7, l-d = 2.5-4.8 µm, 6-8-angular, thick-walled, heterodiametrical.

Basidia: 4-spored, clavate, 28-34 x 11-14 µm.

Clamp connections: absent.

Cheilocystidia: 55-95 x 9-20 µm, clavate to broad clavate, with brown, intracellular pigment; lamellar edge almost sterile (only sparingly mixed with basidia).

Lamellar trama: regular, consisting of long, cylindrical, thin-walled hyphae.

Pileipellis: a trichoderm with clavate terminal cells (-25 µm broad); abundant pigment strictly intracellular, black brownish.

Habitat and distribution: planted pathside near ship-landing-place on gravely-mossy soil. HORAK (1973) collected the type specimen on a rotting tree-stump on Stewart Island (New Zealand). We do not know of any other finds.

Collection examined: New Zealand: Fjordland, Milford Sound, 22. 2. 1997, leg. G. WÖLFEL E3/97 & A. HAUSKNECHT, det. E. HORAK (WU 18239, ZT 7122).

Notes: Our collection has slightly larger spores than the type specimen (HORAK 1973: 8.5-11 x 6-7.5 µm), which further is reported as having a non striate, non hygrophanous pileus. *Entoloma asprelloides* seems to be very closely related, if not conspecific. It is said to differ by blue (not brown) marginate lamellar edge and slightly larger spores.

In our opinion the delimitation of *E. phaeomarginatum* from *E. longistriatum* (PECK) NOORDEL. var. *sarcitulum* (ORTON) NOORDEL. is very difficult, if not impossible (see also NOORDELOOS 1992). There are almost no macro- and microscopical differences, but since we had only a single collection of the New Zealand species at our disposition it would certainly be premature to draw any taxonomic conclusions.

***Entoloma viridomarginatum* (CLELAND) HORAK 1980**, Nova Hedwigia Beih. **65**: 301, **var. *milfordense* WÖLFEL & HAUSKNECHT, var. nova** (Colour fig. XXI, Fig. 4 d-f)

Diagnosis latina:
A typo differt colore pilei pallide viridi, lamellis viridibus plus cyanatris ad atrovirentibus marginatis et stipite lutea.

Typus: New Zealand: Fjordland, Milford Sound, 22. 2. 1997, leg. G. WÖLFEL E2/97 & A. HAUSKNECHT (holotype WU 17483, isotype ZT 7127).

Characters:
Pileus: 10-30 mm broad, already young flat convex to plate-shaped, distinctly depressed in the centre; fresh yellowish (3A5, 3A6), densely covered with fine, appressed, green (28C8) squamules, especially young carpophores and later the umbilicate centre appearing completely green, older yellow colour prevailing; hygrophanous, often up to 2/3 pellucid-striate; surface fine scaly, margin smooth to crenate.

Lamellae: sinuate, distance normal, ventricose, very young almost black green to blue black, later whitish with distinct green tinge, especially towards the lamellar edge, finally salmon with olive green hue, lamellar edge blackish green blue to blackish green, smooth to crenate.

Stipe: 20-33 mm long, 1.5-4 mm thick, mostly longitudinally sulcate and with slightly pointed base, young bright yellow (4A7), later slightly paler, base with white tomentum, smooth, like polished, hollow.

Context: smell and taste indistinct. After collecting the whole carpophore (pileus, lamellae, stipe and context) rather quickly discolouring apricot to bright brick red, thereby all green, blue and yellow colours vanishing.

Spores: 8.2-10.7 x 5.8-7.2 µm, mean 9.5-6.6 µm, Q = 1.2-1.5, l-d = 1.5-3 µm, simple, 5-6-angular, thick-walled, slightly to distinctly heterodiametrical.

Basidia: 4-spored, clavate, 32-38 x 10-12 µm.

Clamp connections: absent.

Cheilocystidia: 30-60 x 9-15 µm, clavate, clavate-contorted; lamellar edge sterile.

Lamellar trama: regular, consisting of cylindrical, thin-walled cells with numerous refringent granules.

Pileipellis: a trichoderm with isolated, erect fascicles of terminal cells, these 10-25 µm broad, cylindrical to clavate, pigment purely intracellular.

Habitat and distribution: planted bed, along side of path to the ship-landing-place, on gravely-mossy soil. *Entoloma viridomarginatum* var. *viridomarginatum* is described from South Australia (CLELAND 1927). Further hints concerning this very attractive species could not be found in the literature.

Notes: The differences in colour of our collection from the original description (CLELAND 1927: 303) are considerable. The pileus is reported as dark green, the lamellae as pale pinkish-cinnamon, becoming dark green towards the lamellar edge, and the stipe as dark green. The microdata presented of the type of *E. viridomarginatum* by HORAK (1980) as well as the unusual discoloration of the fungus and later also of the exsiccatum to brick red are in good accordance with our find. However, the distinctly different colours of pileus, lamellae and stipe are in our opinion sufficient for a separate variety.

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Colour fig. XIV. *Entoloma aromaticum* (WU 18243). - Phot. INGRID HAUSKNECHT. Colour fig. XV. *Entoloma atrellum* (WU 18245). - Phot. G. WÖLFEL. Colour fig. XVI. *Entoloma brunneolilacinum* (WU 17458). - Phot. G. WÖLFEL. Colour fig. XVII. *Entoloma fuscum* (WU 18244). - Phot. INGRID HAUSKNECHT.

Colour fig. XVIII. *Entoloma haastii* (WU 18241). - Phot. G. WÖLFEL. Colour fig. XIX. *Entoloma lanceolatum* (WU 18246, holotypus). - Phot. INGRID HAUSKNECHT. Colour fig. XX. *Entoloma phaeomarginatum* (WU 18239). - Phot. G. WÖLFEL. Colour fig. XXI. *Entoloma viridomarginatum* var. *milfordense* (WU 17483, holotypus). - Phot. INGRID HAUSKNECHT.