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## New spinose species of *Mycena* in sections *Basipedes* and *Polyadelphia* from Thailand

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Three new species of *Mycena* with spinose pilei are described from material collected recently in Thailand. *Mycena pseudoseta* and *Mycena mimicoseta* are provisionally accepted in sect. *Basipedes*, and have recurved pileus spines formed from agglutinated, cylindrical, spinulose hyphae. *Mycena dermatogloea* is provisionally accepted in sect. *Polyadelphia* and has pileus spines formed from exudative gloeocystidia. Illustrations and comparisons with allied taxa are provided.

**Key words:** Agaricales, basidiomycetes, mycenoid fungi, southeast Asia, taxonomy.

### Introduction

During the course of writing a monograph of the worldwide members of *Mycena* sect. *Longisetae* (Desjardin *et al.*, 2002), we encountered several new spinose species that do not belong to sect. *Longisetae*. As redefined by Desjardin and Horak (2002), *Mycena* sect. *Longisetae* comprises species that possess pileosetae, i.e. thick-walled, aculeate to acicular, non-exudative, unicellular structures that arise as terminal cells from pileus subcuticular hyphae and project through the pileipellis. The pileosetae are observed easily with a 10× hand lens and give the pileus surface a hispid or spinose appearance. The three species described herein as new, also have spinose pilei, but the pileus ‘spines’ are not formed from pileosetae. In the first two species described below, the pileus surface is covered with isolated clusters of agglutinated, cylindrical, densely spinulose hyphae that rise above the pileipellis as conical, recurved spines. These spines are readily apparent on primordia and immature basidiomes, but tend to disappear in mature material as the agglutinated hyphae become appressed to the pileus surface. The third

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species described below forms thin-walled, exudative gloeocystidia that arise from gloeoplerous hyphae in the pileus and stipe tramal tissues and project through the pileipellis and stipitipellis. In fresh material, the ‘spines’ on the pileus and stipe surfaces can be observed bearing hyaline, oily droplets.

All measurements and colours reported for microscopic features were made from dried material rehydrated in 100% ethanol followed by distilled water, 3% KOH or Melzer’s reagent. Spore statistics include:  $\bar{x}$ , the arithmetic mean of the spore length by spore width ( $\pm$  SD) for n spores measured in a single sample (specimen);  $\bar{x}_r$ , the range of spore means and  $\bar{x}_m$ , the mean of all spores measured ( $\pm$  SD) where more than one specimen was available; Q, the quotient of spore length and spore width in any one spore, indicated as a range of variation in n spores measured;  $\bar{Q}$ , the mean of Q values in a single sample;  $\bar{Q}_r$ , the range of  $\bar{Q}$  values and  $\bar{Q}_m$ , the mean of  $\bar{Q}$  values where more than one specimen was available.

## Enumeration of taxa

### *Mycena* sect. *Basipedes* (Fr.) Quél.

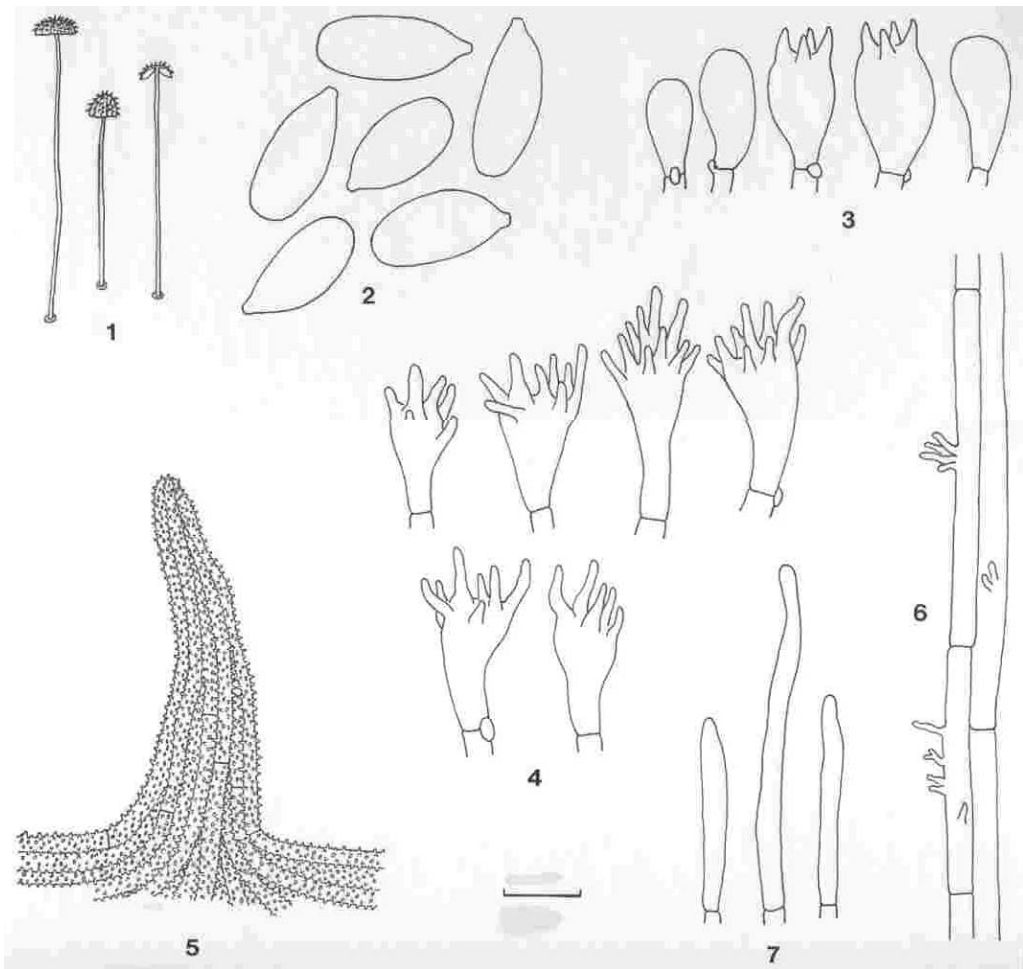
#### *Mycena pseudoseta* Desjardin, Boonpratuang & Hywel-Jones, **sp. nov.**

(Figs. 1-7)

*Pileus* 1-2 mm, convexus dein plano-convexus, striatus, albus vel cinereus, spinis curvatis conicus instructae. *Lamellae* adnexae, distantes, latae, albae. *Stipes* 5-15  $\times$  0.1-0.3 mm, filiformis, glaber, ubique albus, ad basim pruinoso-discoideus. *Sporae* 7-9(-9.5)  $\times$  3.5-4.5  $\mu$ m, ellipsoideae, leves, hyalinae, amyloideae. *Basidia* 4-spora. *Basidiola* clavata. *Pleurocystidia* nulla. *Cheilocystidia* 16-32  $\times$  7-9.5  $\mu$ m, clavata, ad apicem spinulis irregulariter cylindraceis, 4-7  $\times$  0.5-1  $\mu$ m, membrana hyalina praedita. *Hyphae* pileipellidis 4-6  $\mu$ m latae, cylindraceae, gelatinosae, spinulis minutis, cylindraceis 0.5-1.5  $\times$  0.5  $\mu$ m, dense et constater instructae. *Spinulae* pileipellidis acutae, 75-100  $\times$  28-32  $\mu$ m, hyphis cylindraceis compositae. *Trama pilei et lamellarum* ex hyphis dextrinoideis compositum. *Hyphae corticales stipitis* dextrinoideae, leves vel spinulosae. *Caulocystidia* nulla. Ad folia dejecta. Thailandia. Holotypus: BBH #2024.

*Pileus* (Fig. 1) 1-2 mm diam., hemispherical to convex, expanding in age to plano-convex, striate; surface dull, moist, covered with short (up to 0.1 mm), pliant, recurved, white spines; disc grey, margin greyish white to white. *Context* extremely thin, white. *Odor* not distinctive; *taste* not recorded. *Lamellae* ascending, narrowly adnexed to subfree, distant (8-10) with 0-1 series of lamellulae, moderately broad, convex, white. *Stipe* 5-15  $\times$  0.1-0.3 mm, central, terete, filiform,  $\pm$  equal, shiny, glabrous, semipellucid, white overall; arising from a circular, flattened, pruinose, white to grey basal disc.

*Basidiospores* (Fig. 2) 7-9(-9.5)  $\times$  3.5-4.5(-4.8)  $\mu$ m ( $\bar{x}$  = 8.2  $\pm$  0.6  $\times$  4.2  $\pm$  0.3  $\mu$ m, Q = 1.8-2.6,  $\bar{Q}$  = 2.0  $\pm$  0.2, n = 15 spores), ellipsoid, smooth,



**Figs. 1-7.** *Mycena pseudoseta* (from holotype). **1.** Basidiomes. **2.** Basidiospores. **3.** Basidia and basidioles. **4.** Cheilocystidia. **5.** Pileipellis hyphae and pileus spine. **6.** Stipe cortical hyphae. **7.** Basal disc cystidia. Bar: 1 = 4 mm; 2 = 5  $\mu\text{m}$ ; 3, 4 = 10  $\mu\text{m}$ ; 5-7 = 20  $\mu\text{m}$ .

hyaline, amyloid, thin-walled. *Basidia* (Fig. 3) 12-16  $\times$  8-10.5  $\mu\text{m}$ , broadly clavate, 4-spored, clamped. *Basidioles* (Fig. 3) broadly clavate. *Pleurocystidia* absent. *Cheilocystidia* (Fig. 4) numerous, lamellar edge sterile; main body 16-32  $\times$  7-9.5  $\mu\text{m}$ , clavate, hyaline, thin-walled; apical spinulae 4-7  $\times$  0.5-1  $\mu\text{m}$ , irregularly cylindrical to contorted, hyaline, thin-walled. *Pileipellis* (Fig. 5) a cutis with erect, recurved, 'pileus spines'; hyphae 4-6  $\mu\text{m}$  diam., repent, cylindrical, densely spinulose, hyaline, inamyloid, embedded in a thin, gelatinous matrix; 'pileus spines' 75-100  $\mu\text{m}$  tall, 28-32  $\mu\text{m}$  broad at the base, gradually tapered to an acute apex, often recurved, composed of 8-12 agglutinated, densely spinulose hyphae; spinulae 0.5-1.5  $\times$  0.5  $\mu\text{m}$ , simple, cylindrical, unevenly distributed, hyaline. *Pileus trama* of hyphae inflated up to

12 µm diam., smooth, non-gelatinous, dextrinoid. *Lamellar trama* of similar hyphae, dextrinoid. *Stipe tissue* monomitic, non-gelatinous; *cortical hyphae* (Fig. 6) 4-6 µm diam., parallel, cylindrical, smooth or with a few scattered spinulae near stipe base, hyaline, dextrinoid; *medullary hyphae* 6-12 µm diam., smooth, dextrinoid. *Caulocystidia* absent. *Basal disc cystidia* (Fig. 7) 50-100 × 4.5-8 µm, filiform, tapered to a narrow, obtuse apex, smooth, hyaline, inamyloid. *Clamp connections* present on hymenial cells, not observed elsewhere.

*Habit, habitat and distribution:* Solitary on leaves of undetermined dicotyledonous tree in primary forest. Thailand.

*Material examined:* THAILAND, Mae Hong Son Province, Mae Sareing Waterfall National Park, Mae Sakud Luang Waterfall, 14 January 2002, T. Boonpratuang #0310 (BBH #2024, **holotype designated here**).

*Notes:* Distinctive features of *Mycena pseudoseta* include: a tiny, white to pale greyish-white pileus covered with short, recurved spines; subfree, distant, white lamellae; a filiform, glabrous, white stipe that arises from a flattened, white basal disc; amyloid basidiospores; cheilocystidia with relatively long, cylindrical, apical spinulae; a cutis-type pileipellis composed of densely spinulose, subgelatinous hyphae that occasionally agglutinate into clusters of 8-12 hyphae that form the erect and recurved pileus spines; dextrinoid pileus and lamellar tramal tissues; smooth stipe cortical hyphae; and an absence of pleurocystidia and caulocystidia. The micromorphology of this new species suggests affinity with members of *Mycena* sect. Polyadelphia, particularly *M. tubifera* Maas G. & de Meijer from South America, and to members of sect. Basipedes. *Mycena tubifera*, however, lacks the pileus spines formed from agglutinated hyphae characteristic of *M. pseudoseta*. In addition, *M. tubifera* differs in forming a dark brown pileus, an ornamented stipe with conspicuous thin-walled caulocystidia near the apex and caulosetae at the base, and grows on *Araucaria* leaves (*fide* Maas Geesteranus and de Meijer, 1997). Within sect. Basipedes, species with pileus spines composed of agglutinated hyphae have been described from Switzerland [*M. tenuispinosa* Favre *sensu* Maas Geesteranus (1983)] and from Madagascar [*M. spinosa* Métrod (1949), *M. quadratipes* Métrod (1949)]. In addition, the common temperate Northern Hemisphere species *M. stylobates* (Pers.: Fr.) Kummer, sometimes forms spines on the pileus disc (Maas Geesteranus, 1983). All four of the latter species differ significantly from *M. pseudoseta* because of the formation of a separable, gelatinous pellicle. Although pileipellis hyphae in *M. pseudoseta* are embedded in a thin gelatinous matrix, they do not form a separable pellicle. In addition, *M. tenuispinosa* differs from *M. pseudoseta* in forming broader basidiospores (5-5.7 µm), cheilocystidia with shorter apical spinulae (2-3 µm long), has a puberulose stipe base, lacks clamp connections, and grows on

*Alnus* bark in temperate habitats (*vide* Maas Geesteranus, 1983). *Mycena spinosa* differs from *M. pseudoseta* also in forming a larger pileus (5-6 mm diam.), a reddish brown stipe, and has shorter basidiospores (4.5-5.5  $\mu\text{m}$  long) and cheilocystidia with fewer and shorter apical spinulae (*vide* Métrod, 1949). In addition to the separable gelatinous pellicle, *Mycena quadratipes* differs from *M. pseudoseta* in forming a larger, square basal disc ('petit soubassement carré de 2 mm de coté' Métrod, 1949). *Mycena stylobates* differs from *M. pseudoseta* in forming larger basidiomes (pilei 4-10 mm diam.) with different shaped cheilocystidia and pileipellis hyphae, and forms distinct caulocystidia and clamped hyphae.

It is difficult to assign the new species to a currently recognized infrageneric group. *Mycena pseudoseta* shares characters with both sections Basipedes and Polyadelphia. However, members of sect. Basipedes have a separable gelatinous pellicle not found in *M. pseudoseta*, whereas members of sect. Polyadelphia form broadly clavate cheilocystidia covered apically with evenly spaced, short, rod-like spinulae, and have spinulose stipitipellis hyphae. Until additional specimens and allied species are discovered, we tentatively accept *M. pseudoseta* in sect. Basipedes.

***Mycena mimicoseta* Desjardin, Boonpratuang & Hywel-Jones, sp. nov.**

(Figs. 8-12)

*Pileus* 0.5-1 mm, convexus, striatus vel sulcatus, albus, spinulis conicis praeditus. *Lamellae* adnatae, anguste collaratae, distantes, latae, albae. *Stipes* 0.5-3  $\times$  0.1 mm, filiformis, glaber, ubique albus, ad basim pruinoso-discoideus. *Sporae* 6.5-8  $\times$  3.2-3.6  $\mu\text{m}$ , anguste ellipsoideae, leves, hyalinae, amyloideae. *Basidia* et *basidiola* clavata. *Pleurocystidia* et *cheilocystidia* nulla. *Pileipellis ex hyphis* cylindraceutis, constanter spinulosis, cellulae apicales acanthocystis 14-27  $\times$  8-18  $\mu\text{m}$ , late clavatis, spinulis minutis, cylindraceutis 0.5-1  $\times$  0.5  $\mu\text{m}$  instructae. *Spinulae* acutae, 60-100  $\times$  25-30  $\mu\text{m}$ , hyphis cylindraceutis compositae. *Trama pilei et lamellarum* ex hyphis dextrinoideis compositum. *Hyphae corticales stipitis* dextrinoideis levibusque. *Caulocystidia* nulla. Ad folia dejecta. Thailandia. Holotypus: BBH #2015.

*Pileus* (Fig. 8) 0.5-1 mm diam., hemispherical to convex, striate to sulcate; surface dull, dry, covered with short, white spines, glabrescent in age; white overall. Context extremely thin, white. Odor not distinctive; taste not recorded. *Lamellae* ascending to horizontal, adnate, often attached to a pseudocollarium, distant (6-10) with 0-1 series of lamellulae, broad, straight to concave, white. *Stipe* 0.5-3  $\times$  0.1 mm, central, terete, filiform, equal, dull, dry, glabrous, white overall; arising from a circular, flattened, pruinose, white basal disc.

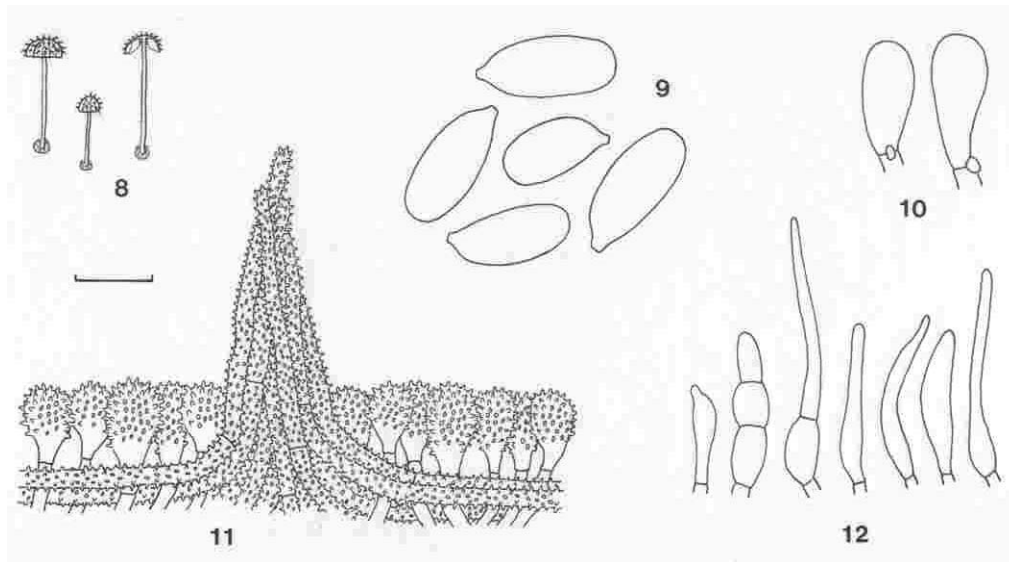
*Basidiospores* (Fig. 9) 6.5-8  $\times$  3.2-3.6  $\mu\text{m}$  ( $\bar{x}$  = 7.4  $\pm$  0.7  $\times$  3.4  $\pm$  0.2  $\mu\text{m}$ , Q = 2.0-2.3,  $\bar{Q}$  = 2.2  $\pm$  0.1, n = only 5 spores seen), narrowly ellipsoid, smooth, hyaline, amyloid, thin-walled. *Basidia* clavate, clamped. *Basidioles* (Fig. 10) clavate. *Pleurocystidia* absent. *Cheilocystidia* absent. *Pileipellis* (Fig. 11) a

hymeniform layer of acanthocysts plus repent hyphae and scattered 'pileus spines'; *acanthocysts* 14-27 × 8-18 µm, clavate to broadly clavate, erect, densely spinulose over upper two thirds, hyaline, inamyloid, thin-walled; 'pileus spines' 60-100 µm tall, 25-30 µm broad at the base, gradually tapered to an acute apex, often recurved, composed of 6-10 agglutinated, densely spinulose hyphae, arising from repent, cylindrical, densely spinulose hyphae 4-8 µm diam. that are interspersed amongst the erect acanthocysts; spinulae 0.5-1 × 0.5 µm, evenly spaced, cylindrical, obtuse; *hyphae* and *acanthocysts* imbedded in a gelatinous matrix. *Pileus trama* composed of interwoven hyphae 2.5-5 µm diam., cylindrical, hyaline, inamyloid to weakly dextrinoid, thin-walled, clamped. *Lamellar trama* of similar hyphae, weakly dextrinoid. *Stipe tissue* monomitic, non-gelatinous; *cortical* and *medullary hyphae* similar, 3-10 µm diam., parallel, cylindrical, smooth, hyaline, dextrinoid, thin-walled. *Caulocystidia* absent. *Basal disc cystidia* (Fig. 12) abundant, 24-64 × 5-10 µm (at broadest), subcylindrical to fusoid, clavate, ventricose-rostrate or irregular in outline, seldom catenulate, smooth, hyaline, inamyloid, thin-walled. *Clamp connections* present on hymenial cells.

*Habit, habitat and distribution:* Scattered, solitary on senescent leaves of undetermined plant in the *Melastomataceae*. Thailand.

*Material examined:* THAILAND, Nakorn Nayok Province, Khao Yai National Park, Dam Chang trail, 1 November 2001, T. Boonpratuang #0301 (BBH #2015, **holotype designated here**).

*Notes:* *Mycena mimicoseta* is characterized by the following suite of features: a tiny, convex, striate pileus covered with short, white spines that disappear in age; distant, broad, white lamellae; a short, glabrous, white stipe that arises from a well-developed, flattened basal disc; relatively narrow, amyloid basidiospores; a gelatinized hymeniform pileipellis of acanthocysts plus some repent spinulose hyphae that occasionally agglutinate into clusters of 6-10 hyphae that form the erect and recurved pileus spines; dextrinoid pileus and lamellar tramal tissues; smooth stipe cortical hyphae; and an absence of hymenial cystidia and caulocystidia. *Mycena mimicoseta* is closely allied with *M. pseudoseta* described above. Both species form gelatinized pileipelli giving rise to spines formed from agglutinated, spinulose hyphae, both species have smooth stipe cortical hyphae, and both lack pleurocystidia and caulocystidia. *Mycena pseudoseta* differs from *M. mimicoseta*, however, in forming much larger basidiomes with distinctive cheilocystidia, and in having a pileipellis formed from a cutis of repent, cylindrical, spinulose hyphae (i.e. lacking a hymeniform layer of acanthocysts). Although the distinction between a pileipellis of repent, cylindrical, densely spinulose hyphae (as in *M. pseudoseta*) and one formed from a hymeniform layer of acanthocysts (as in *M. mimicoseta*) is taxonomically significant, the presence in *M. mimicoseta* of



**Figs. 8-12.** *Mycena mimicoseta* (from holotype). **8.** Basidiomes. **9.** Basidiospores. **10.** Basidioles. **11.** Pileipellis with acanthocysts and pileus spine. **12.** Basal disc cystidia. Bar: 8 = 2 mm; 9 = 5  $\mu$ m; 10 = 10  $\mu$ m; 11, 12 = 20  $\mu$ m.

repent, spinulose hyphae interspersed amongst the acanthocysts and from which arise the pileus spines suggests that *M. mimicoseta* is closely allied with *M. pseudoseta*, and that both species can be accepted in the same section, viz., provisionally in sect. *Basipedes*. We know of no other *Mycena* species that form a hymeniform pileipellis of acanthocysts in combination with pileus spines formed from agglutinated, cylindrical hyphae.

Von Höhnelt (1909) reported *M. clavulifera* (Berk. & Broome) Sacc. from Cibodas (ut Tjibodas), Java. Although he misapplied the epithet *M. clavulifera* to the Javanese specimen [cf. Desjardin (1995) and Desjardin *et al.* (2002) for contemporary descriptions of *M. clavulifera*], von Höhnelt's (1909) description clearly indicates a species similar to, if not conspecific with, *M. mimicoseta*. This observation suggests that the geographic range of *M. mimicoseta* may include much of southeast Asia.

#### ***Mycena* sect. *Polyadelphia* Singer ex Maas G.**

##### ***Mycena dermatogloea* Desjardin, Boonpratuang & Hywel-Jones, sp. nov.**

(Figs. 13-18)

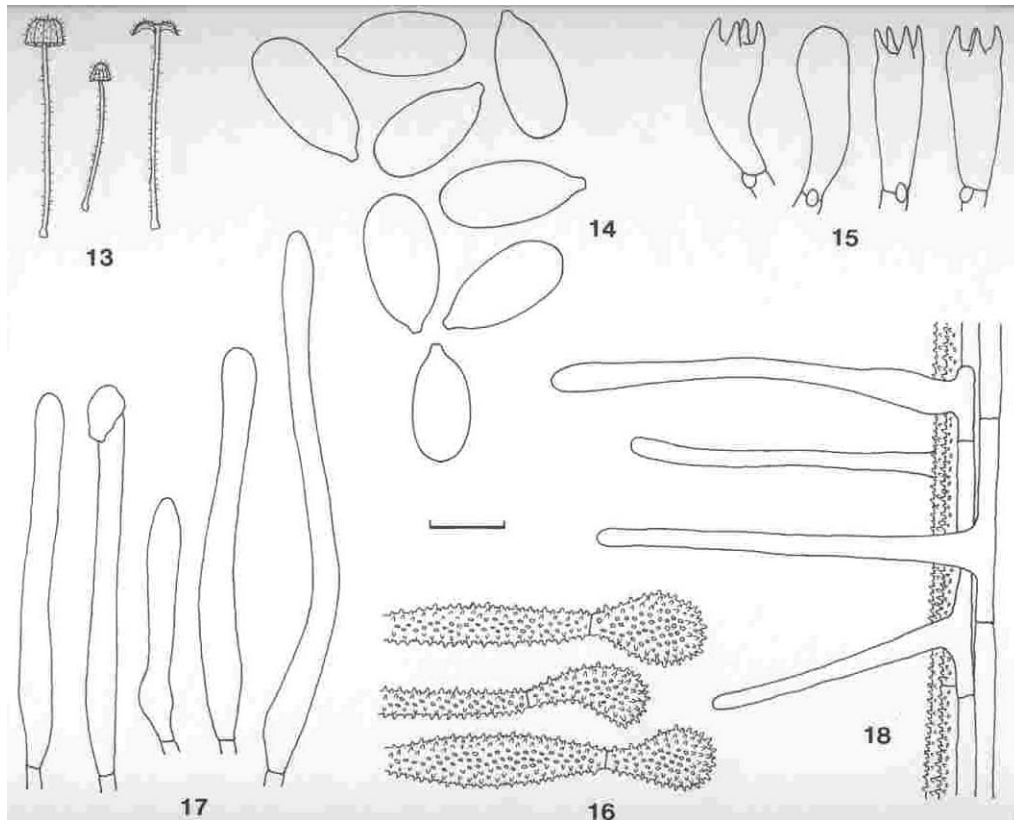
*Pileus* 1-5 mm, convexus dein plano-convexus, umbilicatus, striatus vel sulcatus, albidus, ad apicem aurantio-albidus vel luteolo-albidus, hispidulus, pilis 0.1 mm longis hyalinis sparsis ornatus. *Lamellae* adnatae vel arcuatae, remotae vel distantes, angustae, albae. *Stipes* 3-10  $\times$  0.1-0.3 mm, filiformis, ad basim subbulbosus, insititius, apicaliter glaber, albus, ad basim

hispidus, aurantiacus. *Sporae* 7-9 × 3.5-4.5 μm, ellipsoideae vel subcylindraceae, leves, hyalinae, amyloideae. *Basidia* 4-spora. *Basidiola* clavata. *Pleurocystidia* et *cheilocystidia* nulla. *Hyphae pileipellidis* 5-12 μm latae, cylindraceae vel inflatae, haud gelatinosae, spinulosis constanter obtectae; cellulae apicales ex acanthocystis 24-40 × 12-20 μm, clavatis vel late clavatis, spinulosi. *Spinulae* minutiae, cylindraceae 0.5-1 × 0.5 μm dense instructae. *Pileogloeocystidia* 50-145 × 4-12 μm, subcylindracea, pigmento plasmatico hyalino vel luteolo impleta. *Trama pilei* ex hyphis subdextrinoideis compositum, hyphis gloeopleris interspersum. *Trama lamellarum* ex hyphis dextrinoideis compositum. *Hyphae corticales stipitis* dextrinoideis, semper spinulosis, spinulis cylindraceis, 0.5-3 × 0.5 μm dense instructae. *Caulogloeocystidia* 80-130 × 7-12 μm, cylindracea. Ad folia dejecta. Thailandia. Holotypus: BBH #1808.

*Pileus* (Fig. 13) 1-5 mm diam., obtusely conical to convex, expanding to plano-convex or plane in age, often with a shallow umbilicus, striate to sulcate; surface dull, dry, covered overall with short, hyaline, erect hairs; white to creamy white, sometimes with a pale orangish white or yellowish white disc. Context thin, white. Odor not distinctive; taste not recorded. *Lamellae* rudimentary and vein-like to well-developed, sometimes not reaching margin of pileus, horizontal to ascending, narrowly adnate to arcuate, straight to concave, remote to distant (0-7), narrow, white. *Stipe* 3-10 × 0.1-0.3 mm, central, terete, filiform, ± equal above a subbulbous base, insititious, lacking a basal disc, dull, dry; apex glabrous to hispidulous, white; base hispid, pale orange to orange.

*Basidiospores* (Fig. 14) 7-9 × 3.5-4.5 μm ( $\bar{x}_r = 7.7-8.2 \times 3.9-4.0 \mu\text{m}$ ,  $\bar{x}_m = 7.9 \pm 0.3 \times 3.9 \pm 0.1 \mu\text{m}$ ,  $Q = 1.8-2.4$ ,  $\bar{Q}_r = 1.99-2.03$ ,  $\bar{Q}_m = 2.0 \pm 0.03$ ,  $n = 15$  spores per 3 collections), ellipsoid to subcylindrical, smooth, hyaline, amyloid, thin-walled. *Basidia* (Fig. 15) 18-22 × 6-7.5 μm, clavate, 4-spored, rarely 2-spored, clamped. *Basidioles* (Fig. 15) clavate. *Pleurocystidia* absent. *Cheilocystidia* absent. *Pileipellis* a cutis of repent hyphae with suberect to erect, broadly clavate terminal cells, plus marginal cystidia and pileogloeocystidia; hyphae (Fig. 16) 5-12 μm diam., cylindrical to inflated, densely spinulose, non-gelatinous, hyaline, inamyloid; *terminal cells and marginal cystidia* (Fig. 16) as acanthocysts, 24-40 × 12-20 μm, clavate to broadly clavate, covered with evenly spaced spinulae; *spinulae* 0.5-1 × 0.5 μm, cylindrical; *pileogloeocystidia* (Fig. 17) scattered, 50-145 × 4-12 μm (at broadest), subcylindrical, obtuse, seldom with slightly swollen apex, hyaline, inamyloid, thin-walled, non-refractive to weakly refractive, contents hyaline to pale yellow; in water mounts sides and apex of cystidia with granular to globular adherent exudates, these exudates soluble on 3% KOH; fresh material with hyaline droplets adhered to cystidia apices. *Pileus trama* of interwoven hyphae, cylindrical or inflated up to 24 μm diam., non-gelatinous, hyaline, inamyloid to weakly dextrinoid, with interspersed, refractive, gloeoplerous hyphae that terminate in pileogloeocystidia. *Lamellar trama* dextrinoid. *Stipe*





**Figs. 13-18.** *Mycena dermatogloea* (from holotype). **13.** Basidiomes. **14.** Basidiospores. **15.** Basidia and basidiole. **16.** Pileipellis hyphae with terminal cells and marginal cystidia. **17.** Pileogloeocystidia. **18.** Stipe cortical hyphae and caulogloeocystidia. Bar: 13 = 2 mm; 14 = 5  $\mu$ m; 15 = 10  $\mu$ m; 16-18 = 20  $\mu$ m.

*tissue* monomitic; *cortical hyphae* (Fig. 18) 3.5-6  $\mu$ m diam., parallel, cylindrical, densely spinulose, hyaline, dextrinoid, unclamped; *spinulae* 0.5-3  $\times$  0.5  $\mu$ m, cylindrical; *terminal cells of cortical hyphae* suberect to erect, cylindrical to clavate, forming densely spinulose caulocystidia scattered over stipe surface, rare, absent in some basidiomes; *medullary hyphae* 6-11  $\mu$ m diam., cylindrical, smooth, hyaline, strongly dextrinoid. *Caulogloeocystidia* (Fig. 18) like the pileogloeocystidia, 80-130  $\times$  7-12  $\mu$ m (at the base)  $\times$  5.5-8  $\mu$ m (at the apex), subcylindrical or gradually narrowed towards the obtuse apex, hyaline, inamyloid, thin-walled, exudative. *Clamp connections* observed only at base of basidia.

*Habit, habitat and distribution:* Solitary to gregarious on senescent leaves of undetermined dicotyledonous tree. Thailand.

*Material examined:* THAILAND, Nakorn Nayok Province, Khao Yai National Park, Tatapu site, 5 July 2000, T. Boonpratuang #096 (BBH #1808, **holotype designated here**);

Khao Yai National Park, Patabak trail, 16 September 2000, T. Boonpratuang #00146 (BBH #1858); Khao Yai National Park, Wat Hub Meui, 30 June 2001, T. Boonpratuang #0265 (BBH #1977); Khao Yai National Park, Darn Chang trail, 1 November 2001, T. Boonpratuang #0302 (BBH #2016) and #0303 (BBH #2017).

*Notes:* *Mycena dermatogloea* is distinct from all other *Mycena* species because of the following combination of features: a relatively small, sulcate, white to creamy white pileus covered with short, erect, exudative hairs; poorly- to well-developed lamellae that are remote to distant and arcuate; a hispidulous, filiform, insititious stipe that is white at the apex and orange at the base; amyloid basidiospores; an absence of hymenial cystidia; a non-gelatinous pileipellis of repent, densely spinulose hyphae through which arise numerous, hyaline, thin-walled, exudative pileogloeocystidia; dextrinoid tramal tissues; and a stipitipellis of densely spinulose hyphae through which arise exudative caulogloeocystidia. The relatively long, exudative dermatocystidia which arise through densely spinulose hyphae is unusual in *Mycena*. Without such dermatocystidia, the micromorphology of *M. dermatogloea* suggests an alliance with members of sect. Polyadelphia, and we provisionally accept the new species in this section. The dermatogloeocystidia of *M. dermatogloea*, in combination with small, white basidiomes and often poorly-developed lamellae are reminiscent of the genus *Resinomyцена* (Redhead and Singer, 1981). The pileipellis morphology in all known species of *Resinomyцена* is distinctly different from that of *M. dermatogloea* and suggests that any similarity in morphology is a result of convergence.

*Mycena dermatogloea* shows some similarities with *M. paediscula* (Berk. & Broome) Sacc. Pegler (1986) provided a description of *M. paediscula* and included it in sect. Pudicae Maas. G. *Mycena* sect. Pudicae is based on *M. pudica* Hora, a new name for the homonymic *M. quisquiliaris* (Joss.) Kühn., which itself is a synonym of *M. saccharifera* (Berk. & Broome) Gillet [see Maas Geesteranus (1986: 285) for a discussion of the nomenclature]. Kühner (1985) transferred the type species of sect. Pudicae to the genus *Resinomyцена*. The micromorphology of the pileipellis of *M. paediscula* as reported by Pegler (1986) is distinctly different from that of all known members of *Resinomyцена* and we cannot accept its placement in that genus. Rather, the pileipellis micromorphology of *M. paediscula* is similar to that of *M. dermatogloea* and the two species may be better placed in a redefined sect. Polyadelphia, albeit one that includes species with gloeocystidia. Both *M. paediscula* and *M. dermatogloea* form pileipelli composed of repent, densely spinulose hyphae and acanthocystoid terminal cells through which arise pileogloeocystidia. *Mycena paediscula* differs from *M. dermatogloea* in forming basidiomes with a pale brown stipe base (not orange), with shorter basidiospores (5.5-7.5  $\mu\text{m}$  long), with conspicuous, lageniform cheilogloeocystidia, shorter

pileogloeocystidia (30-55 µm long), and differs in growing on dead wood (*vide* Pegler, 1986).

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