

P E R S O O N I A

Published by the Rijksherbarium / Hortus Botanicus, Leiden
Volume 14, Part 4, pp. 671–673 (1992)

CLAVARIA STELLIFERA, SPEC. NOV.

J. GEESINK* & C. BAS**

Clavaria stellifera, spec. nov., found on grasslands on (probably calcareous) clay or loam in the Netherlands and Belgium, is described and discussed. It is a species with the colours of *C. rosea* Fr. and *C. incarnata* Weinm., but with spores ornamented as in *C. asterospora* Pat.

In the year 1989 a pink species of *Clavaria* with ornamented spores was found at two localities in the Netherlands. A search in the mycological collections of the Rijksherbarium, Leiden, brought to light three other collections with the same characters: one from Belgium and two from the Netherlands.

As we were unable to identify this fungus it is described here as a new species.

Clavaria stellifera Geesink & Bas, spec. nov.—Figs. 1–5

Receptacula solitaria vel subfasciculata, 20–50 mm alta, 1.5–5 mm lata, simplicia, rosea vel salmonea. Sporae 6.6–9.3 × (4.8–)5.3–7.4 µm, spinulosae. Basidia fibulatae. Hyphae efulatae. Typus: 'J. Schreurs 1926, 11.X.1989, Netherlands, prov. Noord-Brabant, Biesbos. L.'

Basidiocarps 20–50 mm high, solitary to subfasciculate, subgregarious, very slenderly fusiform to very slenderly clavate or subcylindrical. Clavula 1.5–5 mm wide, with obtuse to subacute apex, rarely abruptly enlarged or somewhat forked at apex, deep pink or salmon-pink (e.g. Séguin 169, 343; Munsell 10 R 6/8; K. & W. (Kornerup & Wanscher, 1978) 8B6, 7A4), sometimes with one or two longitudinal furrows. Stipe poorly delimited to rather distinct, e.g. 4–7 × 1 mm, somewhat tapering downwards, concolorous or slightly paler or slightly more orange (e.g. K. & W. 6A4), glabrous and somewhat shiny. Colour of context not recorded. Smell absent. Taste not recorded.

Spores [68/7/5]¹ 6.6–9.3(–10.0) × (4.8–)5.3–7.4 µm; Q (1.05–)1.15–1.55(–1.65), average Q 1.2–1.5, subglobose to ellipsoid, long remaining thin-walled and smooth, but finally rather thick-walled and decorated with sparse, very slender, up to 2.5(–3) µm long, cylindrical spines, colourless to slightly brownish tinged in NH₄OH when mature and under microscope, congophilous, cyanophilous. Basidia 35–55(–63) × 7.2–11.2 µm, mostly 4-spored but with a few 2-spored intermixed, with bifurcate base because of the presence of a loop-like clamp. Sclerobasidia and sclerobasidioles (with walls sometimes to 3 µm thick) abundant in some collections, hardly present in others. Tramal hyphae up to 17 µm wide, thin-walled, clampless, with intercellular crystals.

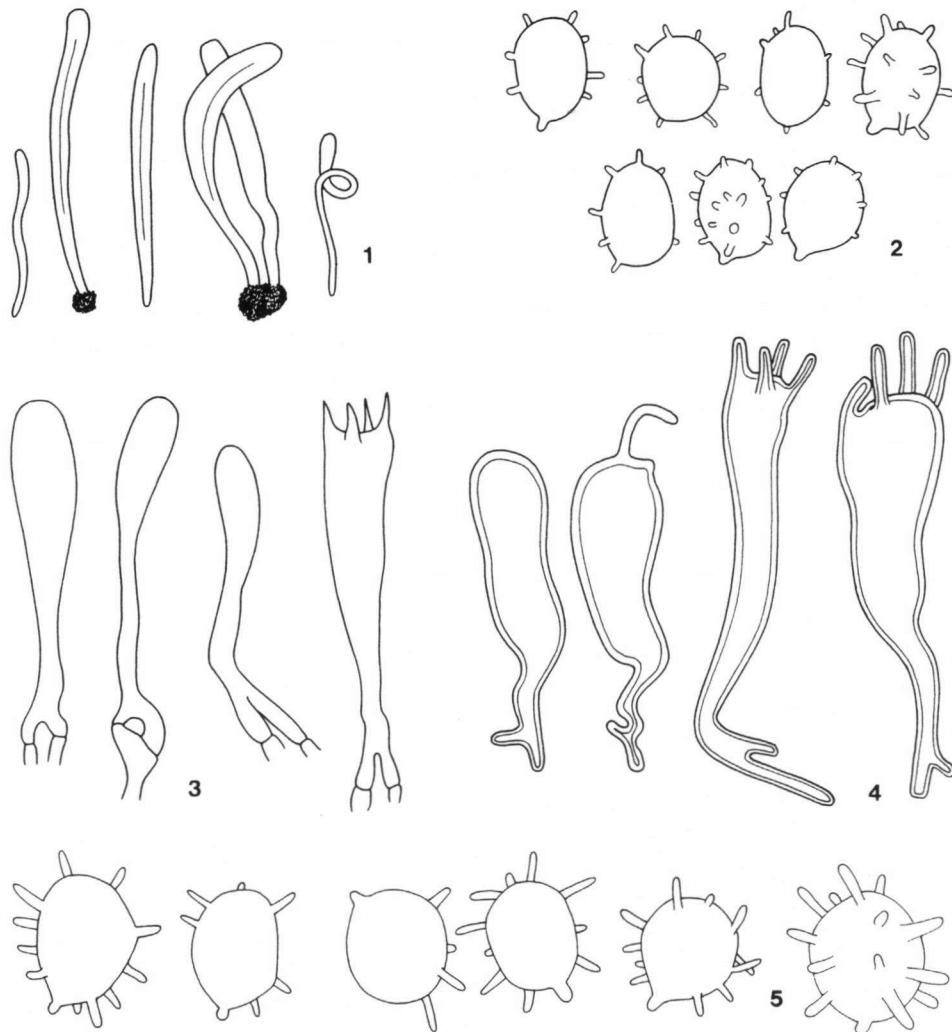
Habitat & distribution.—Among grasses and mosses on natural and semi-natural grass-lands on probably calcareous or at least neutral clay or loam. Aug.–Oct. Thus far known from four remote localities in the Netherlands and one in eastern Belgium.

Etymology: stella, star; -fer, carrying.

* Molenstraat 27, 6914 AC Herwen, The Netherlands.

** Rijksherbarium / Hortus Botanicus, P.O. Box 9514, 2300 RA Leiden, The Netherlands.

¹ This annotation stands for: 68 spores measured from 7 basidiocarps from 5 collections.



Figs. 1–4. *Clavaria stellifera*. — 1. Basidiocarps (x 1). — 2. Spores (x 1500). — 3. Basidioles and basidium (x 1000). — 4. Sclerobasidioles and sclerobasidia (x 1000).

Fig. 5. *Clavaria asterospora*. — Spores (x 1500, from Bas 1340).

Collections examined.—NETHERLANDS: prov. Overijssel, Wijhe, Windesheim, loam pits, 30 Aug. 1987 (L); prov. Noord - Brabant, Biesbos, on dike East of St. Jansplaat, 11 Oct. 1989, J. Schreurs 1926 (type, L); prov. Limburg, Wylre, nature-reserve Wylré-akkers, 20 Sept. 1980, V. Westhoff (L); Heerlen, Kunderberg, 5 Sept. 1989, L. Jalink & M. Nauta 6272 (L). — BELGIUM: Ardennes, near river Lesse, 10 Aug. 1968, Mrs. S. van der Vaart (L).

It is remarkable that in this species as well as in the only other species of *Clavaria* in Europe with finger-like ornaments on mature spores, viz. *C. asterospora* Pat., this ornamentation seems to develop fairly late, so that in each hymenium preparation a number (sometimes even a great number) of smooth spores and a number of spores with only a few or only very short ornaments are found. Petersen (1988: 32) reported on the same phenomenon. Because of this we may assume that in the past collections of *Clavaria* have been misidentified because the presence of a limited number of ornamented spores was looked upon as an contamination.

We have considered the possibility that the present taxon is nothing more than a pink variety of *C. asterospora*. But besides the difference in colour there also seems to be a difference in spore-size and spore-shape. Unfortunately we had only two collections of *C. asterospora* available for comparison. In these we found the spines on the spores somewhat longer (up to 3.5–4 µm) and the spores on an average more subglobose, longer and certainly broader:

Clavaria asterospora: [20/2/2] 7.9–11.2 × 6.9–9.7 µm, Q 1.05–1.35, average Q 1.15–1.2;

Clavaria stellifera: 6.6–9.2(–10.0) × (4.8–)5.3–7.4 µm, Q 1.05–1.65, average Q 1.2–1.5.

Moreover, there seems to be a difference in habitat. It looks as if *C. asterospora* prefers woodland and *C. stellifera* open grass-land.

In connection with the differences in shape and size of the spores, it should be mentioned that in literature (Corner, 1970: 31; Donk, 1933: 80; Jülich, 1984: 68; Maas Geesteranus, 1976: 14; Bourdot & Galzin, 1928: 113) the range of the spore-size of *C. asterospora* is much wider than the one given above. Patouillard (1887: 28, pl. 569), however, described and depicted the spores of that species as globose.

Petersen (1988: 32) described seven new species of *Clavaria* with ornamented spores from New Zealand. Only one of these, viz. *C. megaspinosa*, has pink basidiocarps combined with long, narrow, cylindrical spines on the spores. We trust, however, that the more globose to subglobose spores (7.2–9.4 × 6.5–9.0 µm, Q 1.05–1.15, average Q 1.1), the more slender basidiocarps (up to 50 × 2 mm), the different habitat (rotten wood and humus), and its antipodal distribution are sufficient reasons for keeping *C. megaspinosa* and *C. stellifera* apart.

REFERENCES

- BOURDOT, H. & GALZIN, A. (1928). Hyménomycètes de France. Sceaux.
- CORNER, E.J.H. (1970). Supplement to 'A monograph of *Clavaria* and allied genera.' In Beih. Nova Hedwigia 33.
- DONK, M.A. (1933). Revision der Niederländischen Homobasidiomycetace-Aphyllophoraceae. Utrecht.
- JÜLICH, W. (1984). Die Nichtblätterpilze, Gallertpilze und Bauchpilze. In Gams, Kl. Kryptog. fl. 2 b/1.
- KORNERUP, A. & WANSCHER, J.H. (1978). Methuen Handbook of Colour, Ed. 3. London.
- MAAS GEESTERANUS, R.A. (1976). De clavarioide fungi. In Wetensch. Meded. K. Nederl. natuurhist. Veren. 113.
- MUNSELL (1975). Munsell soil color charts. Baltimore.
- PATOUILARD, N. (1887). Tabulae analyticae Fungorum, Fasc. 6. Paris.
- PETERSEN, R.H. (1988). The clavarioid Fungi of New Zealand. DSIR Bull. 236. Wellington.
- SÉGUY, E. (1936). Code universel des couleurs. Paris.