
NOTAS

THE ISOLATION OF THE PERFECT FORM OF *MICROSPORUM GYPSEUM*, *NANNIZZIA GYPSEA*, STOCKDALE, 1963, FROM BRAZILIAN SOIL.¹

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(With 4 Figures)

SUMMARY: Our work is on the isolation from Brazilian soil of the perfect stage of *Microsporum gypseum*, *Nannizzia gypsea*, Stock., 1963, using cut sterilized children hair as bait.

THE perfect state of the dermatophytes was first reported by *Nannizzi* in 1927. As he obtained the perfect form using non-sterile soil, his results weren't accepted, for the cleistothecia produced could be of another fungus that was contaminating the soil used.

On this basis, his discovery was forgotten for many years until the works of *Griffin* (1960) (2) who obtained the perfect form of *Microsporum gypseum*, using sterile soil.

Since then, many other investigators have obtained the perfect form

of dermatophytes (1) (4) and among them *Stockdale* (1963) (3) working with the so-called *Microsporum gypseum* noted that it was the imperfect form of two species that could be perfectly identified in the perfect state and which she named *Nannizzia gypsea* and *Nannizzia incurvata*.

MATERIALS AND METHODS

For this work we used soil samples from Sorocaba (São Paulo), Praia Brava and Friburgo (Rio de Janeiro); sterilized children hair; Sabouraud slants; 4% agar medium and sterilized distilled water.

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To obtain the perfect form:

The technique we used was that of Vanbreuseghen. (5)

Each soil sample, from where we wanted to isolate the *Microsporium gypseum* strain, were distributed in sterilized Petri dishes to cover the bottom of the plate and unmodified with sterile water. Over the soil we put some cut sterilized children hair, and incubated them at $\pm 23^{\circ}\text{C}$.

To obtain the imperfect form:

Some mature cleistothecia were picked up and rolled on 4% agar medium for cleaning them.

A cleaned cleistothecia were crushed in a tube with sterile water to liberate the ascospores.

A drop of this suspension was put on a plate and scattered with a Drigalski loop to obtain monosporic cultures.

After 24 hours we looked for germinated ascospores that were isolated from the others and picked them up from the plate to Sabouraud slants.

RESULTS

On the plate where we put unsterile soil from which we wanted to isolate the perfect form of *Microsporium gypseum* we observed, a couple of days later, the growth of a slight colony of fungi.

After more 20 days of incubation at room temperature, we observed the presence of cleistothecia (fig. 1).

They were cream, globose, involved by the peridial hyphae and with $450\text{-}580\mu$ in diameter (fig. 2).

The peridial hyphae are hyaline and have spiculated walls with their tips curved toward the cleistothecium (fig. 3).

The asci has eight bright yellow lenticular ascospores (fig. 4).

In Sabouraud slants the monosporic inoculation gave rise after ± 3

days, to cream and powdered colonies, with macroconidia fusiform, spiculated, with $45 \times 13\mu$ in diameter and 5 septa.

The micelium were septate and hialine.

DISCUSSION

The result we obtained showed that the techniques of Vanbreuseghem is perfect for the isolation and identification of *Microsporium gypseum* in its perfect form (5).

We don't know why using so different soil samples we were able in obtaining only *Nannizzia gypsea* and no one species of the other species of *Nannizzia*.

We based the classification of our strains in the work of Stockdale (3).

CONCLUSION

The cleistothecia we obtained have all the characteristics of *Nannizzia gypsea*. Monosporic cultures obtained from isolated ascospores taken from cleistothecia, were of a filamentous fungus with all the characteristics of *Microsporium gypseum*.

SUMÁRIO

Nosso trabalho trata do isolamento do solo brasileiro da forma perfeita de *Microsporium gypseum*, *Nannizzia gypsea*, Stockdale, 1963, usando como substrato cabelo esterelizado de criança.

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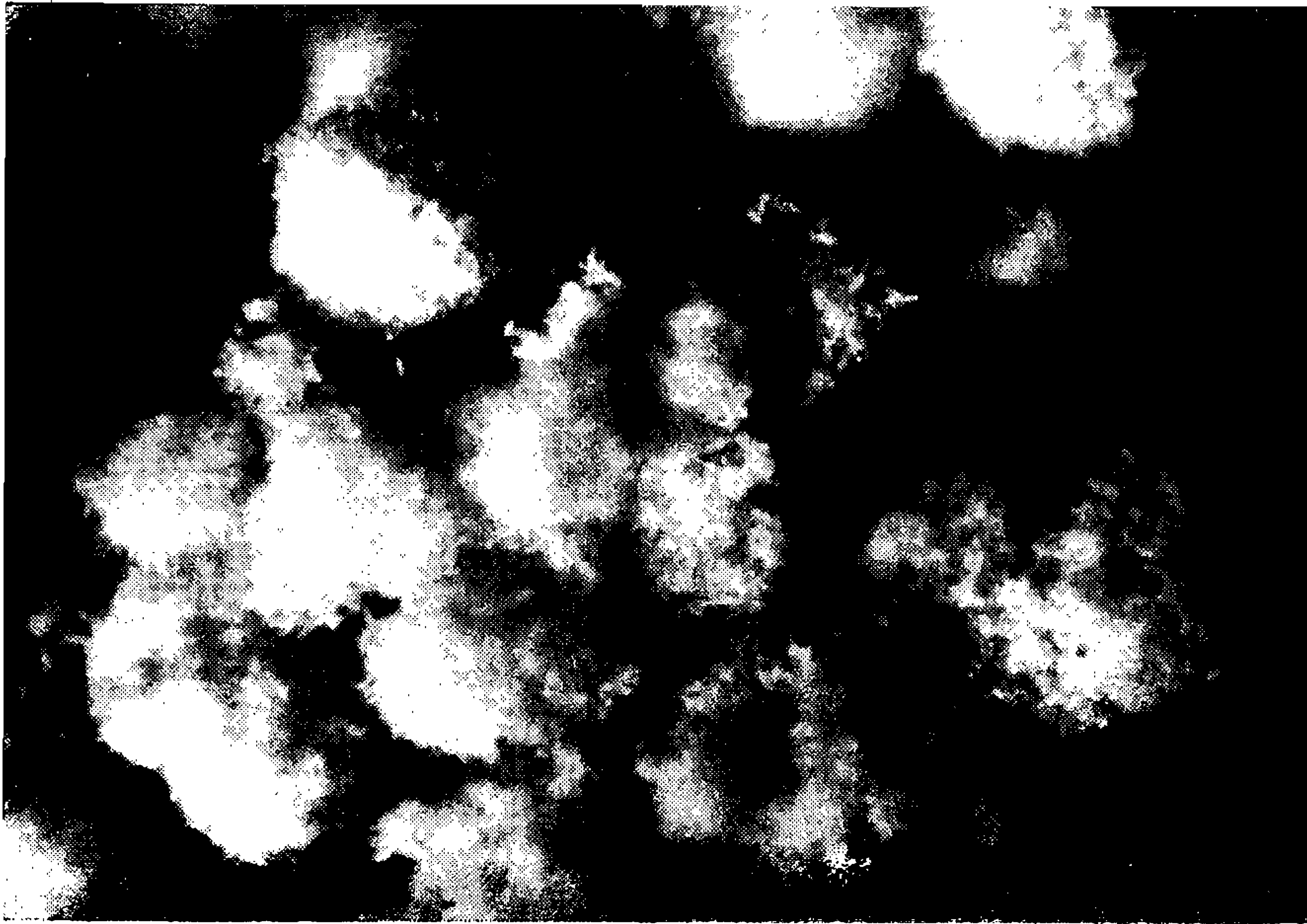


Fig. 1 — Aspect of the perfect form of the colony on soil and hair, showing cleistothecia.

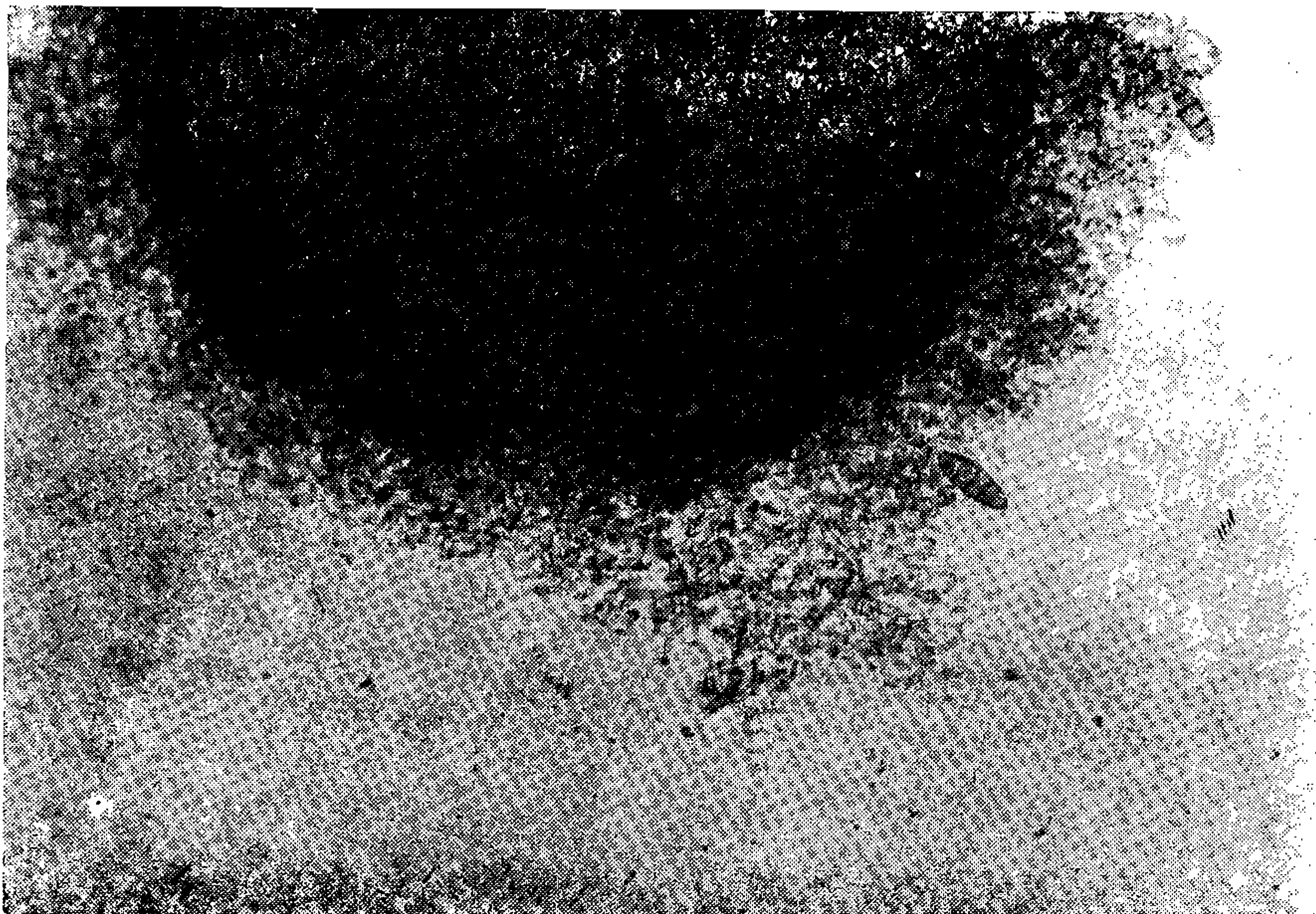


Fig. 2 — A cleistothecium with its peridial hyphae and some macroconidia. $\times 57$



Fig. 3 — The peridial hyphae. $\times 580$



Fig. 4 — A detail of the asci showing the ascospores. $\times 1440$

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