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EXPLANATION OF FIGURES

FIGS. 1–12. *Preussia funiculata*. All ×1200. FIG. 1. Rehm, Ascomyceten 1044. FIG. 2. Zopf, Flora islebiensis 1873. FIGS. 3, 4. TRTC 34645. FIG. 5. Petrak, Flora Bohemiae and Moraviae exs. 625. FIG. 6. Fuckel, Fungi rhenani 1750. One ascospore is without septa. FIG. 7. Jaczewski, Smolensk 1895. One ascospore is without septa, two are uniseptate, and one is biseptate. FIG. 8. Thümen, Mycoth. Univ. 161. FIG. 9. Krieger, Fungi saxonici 426. One ascospore is without septa. FIG. 10. Krieger, Fungi saxonici 1164. FIG. 11. TRTC 34645. FIG. 12. TRTC 34639.

FIGS. 13–24. *Preussia fleischhakii*. All ×1200. FIG. 13. Cells of peridium. TRTC 31723. FIG. 14. Ascus with outline of ascospores. Ascus on left showing all eight ascospores. The same ascus is shown on right with lower four ascospores complete and parts of upper four omitted. TRTC 31723. FIG. 15. Paraphyses taken from a normal-sized ascocarp which contained very few asci. TRTC 31723. FIG. 16. Two asci with outline of ascospores. TRTC 31723. FIG. 17. Transverse view of an ascus taken at three different levels. The one at the left shows the four end-cells of four ascospores nearest the apex of the ascus. The middle view shows the second cell of these four ascospores and the upper cell of the next two. The view on the right side is taken through the next lower series of cells, namely, the third cell of four ascospores, the second cell of two ascospores, and the upper cell of the last two ascospores. TRTC 31723. FIG. 18. Cells of peridium. Rabenh. Fungi eur. 921. FIG. 19. Ascus, left view showing complete outline of upper four ascospores and right view showing lower four. Rabenh. 921. FIG. 20. Ascus with outline of ascospores, two being omitted and two others only partially shown. Rabenh. 921. FIG. 21. Ascus with outline of all eight ascospores. Rabenh. 921. FIG. 22. Same ascus as shown in FIG. 21. The left view shows complete outline of lower three ascospores and the right view the upper five. Rabenh. 921. FIG. 23. Mature ascospores showing germinal slits. Six are shown stippled, three in outline only. The ascospore on the left has the upper septum lacking. The one second from left has the lower septum lacking. Rabenh. 921. FIG. 24. Outline of ascospores, those on the left have separated or partially separated into spore segments. TRTC 31723.

FIGS. 25–30. *Preussia typharum*. All ×1200. FIG. 25. Asci and ascospores, all except three in outline only. Note the ascospore on the left side has only the mid-septum; the upper and lower septa are lacking. The ascospore near the figure 25 has the lower septum lacking. TRTC 32085. FIG. 26. Three asci with outline of ascospores. Eight ascospores and eight segments partially separated. TRTC 31724. FIG. 27. Three ascospores and 11 ascospore segments. Sydow, Mycoth. March. 2830. FIG. 28. Two asci and three ascospores. The ascus on the left is mature with eight dark ascospores, shown in outline only. The ascus on the right is immature with eight, hyaline ascospores just barely visible. Thümen, Myc. Univ. 161. FIG. 29. Two asci, ascospores, and segments of ascospores. The ascus on the left is immature with eight, hyaline ascospores just barely visible. Note that each ascospore is already three-septate. The ascus on the right is mature but contains only six dark ascospores, shown in outline only. Only one of the ascospores is normal with three septa. The remaining five have only one septum each; the two end septa are lacking. A similar two-celled ascospore is shown at the bottom of the page. Beside it is another ascospore with all three septa lacking. IMI 13767. FIG. 30. Ascospore. Rabenh. Fungi Eur. 1338

FIG. 31. *Preussia punctata* ×1200. Ascospores and ascospore segments; Fleischhak, Thuringia.

FIGS. 32–38. *Preussia isomera*. All ×1200. TRTC 32089, cultures. FIG. 32. Early stages in development of ascocarps. FIG. 33. Cells of peridium. FIG. 34. Asci in lactophenol. The inner membrane has separated from the outer wall. Croziers are shown at base of asci. FIG. 35. Young asci developing with croziers at base. FIG. 36. Lower part of outer wall of ascus. The upper cap has dehisced in a manner typical of the Loculoascomycetes. FIG. 37. Four mature ascospores [before separation into segments] and ascospore segments. FIG. 38. Mature asci with dark ascospores, shown in outline only. The three illustrations at the lower left represent the same ascus. The figure at the left shows all eight ascospores in outline. The second from the left has the upper four omitted and the third from the left has the lower four omitted.

FIGS. 39–49. *Preussia dispersa*. All ×1200, unless marked otherwise. Rogerson SD 53–54–7. FIGS. 39–41. Early stages in the development of ascocarps or spermogonia. Abundant hyphal fusions are shown in FIG. 40. FIGS. 42, 43. Later stages in development of ascocarps. FIG. 44. Two spermogonia showing prominent ostioles. ×120. FIG. 45. Upper part of spermogonium showing ostiole surrounded by thick-walled peridial cells. FIG. 46. Same as Fig. 45. FIG. 47. Hyaline conidia, each with a single oil globule. FIG. 48. Asci, all except one immature. FIG. 49. Light-brown ascospore segments, each with two oil globules.

FIGS. 50–61. *Preussia multispora*. All ×1200. Baarn culture. FIG. 50. Ascogenous hyphae with very young asci with croziers. FIGS. 51, 52. Young asci shortly after formation of ascospores. FIG. 53. Swollen cells of paraphyses. FIG. 54. Young asci with ascospores just barely visible; with four segments attached end to end. FIG. 55. Mature ascus with 32 separate ascospore segments. FIG. 56. Mature ascus with 8 one-celled ascospores; septa having failed to develop. FIG. 57. Mature ascus with 8 one-celled ascospores (4 in side view, 4 in end view). FIG. 58. Mature ascus with 8 one-celled ascospores. In Figs. 55–58 the brown ascospores are shown in outline only. FIG. 59. Normal, brown ascospore segments each with two oil globules, four having separated from each ascospore. FIG. 60. Double ascospore segments, each with four oil globules, two having separated from each uniseptate ascospore. FIG. 61. Six nonseptate ascospores, some of the larger oil globules representing two or more normal globules.

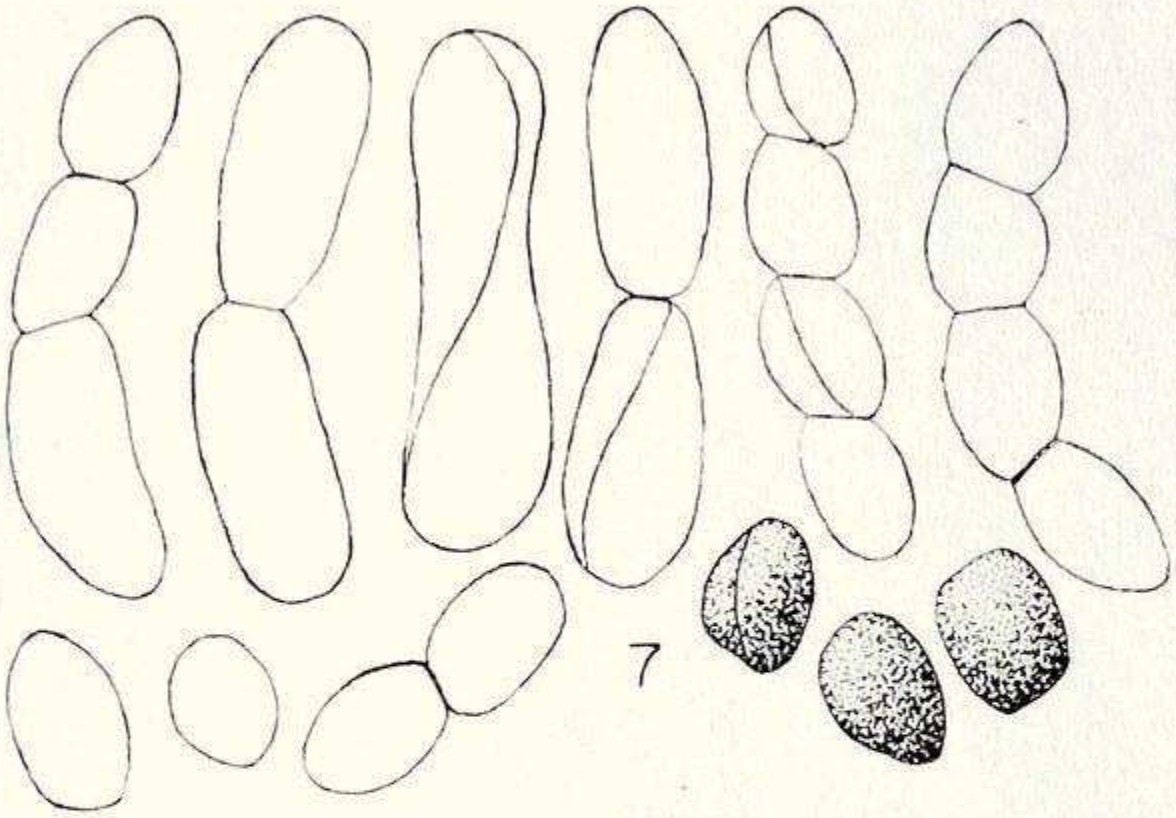
FIGS. 62–71. *Preussia dispersa*. All ×1200. Cooke 1168. FIG. 62. Spermogonium showing ostiole. FIG. 63. Hyaline conidia each with a single oil globule. FIG. 64. Double ascospore segment, representing half of a uniseptate ascospore. FIGS. 65, 66. Normal ascospore segments, four having separated from each ascospore. FIG. 67. End view of mature ascus with only 22 of the 32 ascospore segments visible and shown in outline. FIG. 68. Very young ascus before ascospore formation. FIG. 69. Ascus with two of the ascospores nonseptate. FIG. 70. Two young asci with ascospores just barely visible. FIG. 71. Very young ascus with single large globule and before ascospore formation.

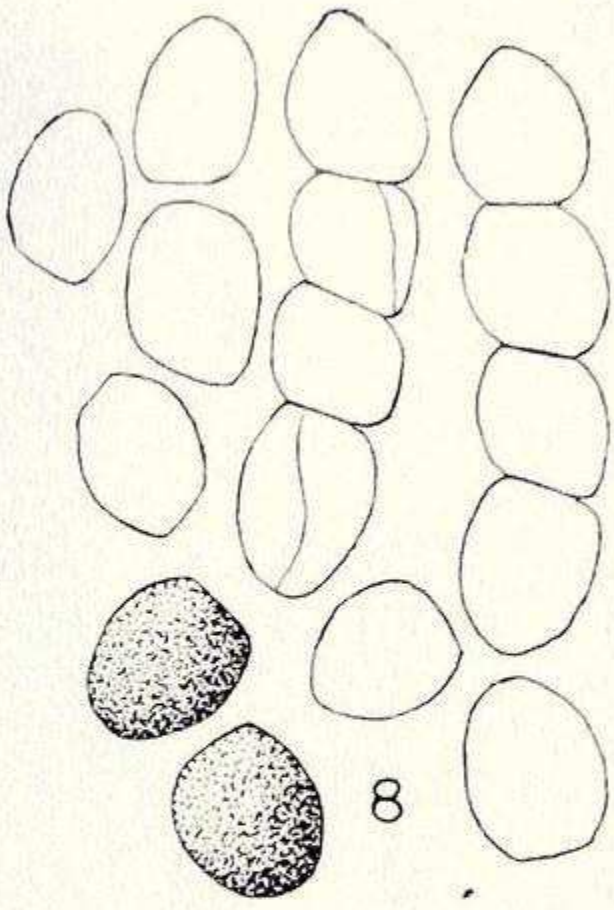
FIGS. 72–83. *Preussia terricola*. Goos 217. FIG. 72. Section of three ascocarps on surface of agar and embedded in dense layer of aerial hyphae. The layer below the ascocarps represents the zone of reddish brown hyphae submerged in agar. The thin peridium of the ascocarp consists of a dark brown outer layer in which the cells are very obscure and an inner hyaline layer. ×175. FIG. 73. Section of peridium of very young ascocarp. ×1200. FIG. 74. Surface view of peridium showing very obscure, small, angular cells with characteristic opaque, irregular, thickened spots, ×1200. FIG. 75. Aspospores and separated ascospore segments. ×1750. FIG. 76. Asci with paraphyses in various stages of development. ×1200. FIG. 77. Two asci with ascospores nearly mature. ×1200. FIG. 78. Mature ascus containing only four giant four-celled brown ascospores. ×1750. FIG. 79. Two young asci with ascospores still hyaline. The ascus on the right still contains a large globule. ×1200. FIG. 80. Mature ascus containing about 8 double segments (four ascospores), and 16 single segments (four ascospores). ×1200. FIG. 81. Mature ascus with 32 single ascospore segments which have separated, shown in outline only. ×1200. FIG. 82. Apical portion of ruptured ascus. ×1200. FIG. 83. Ascospore and ascospore segments showing germinal slits. ×1200.

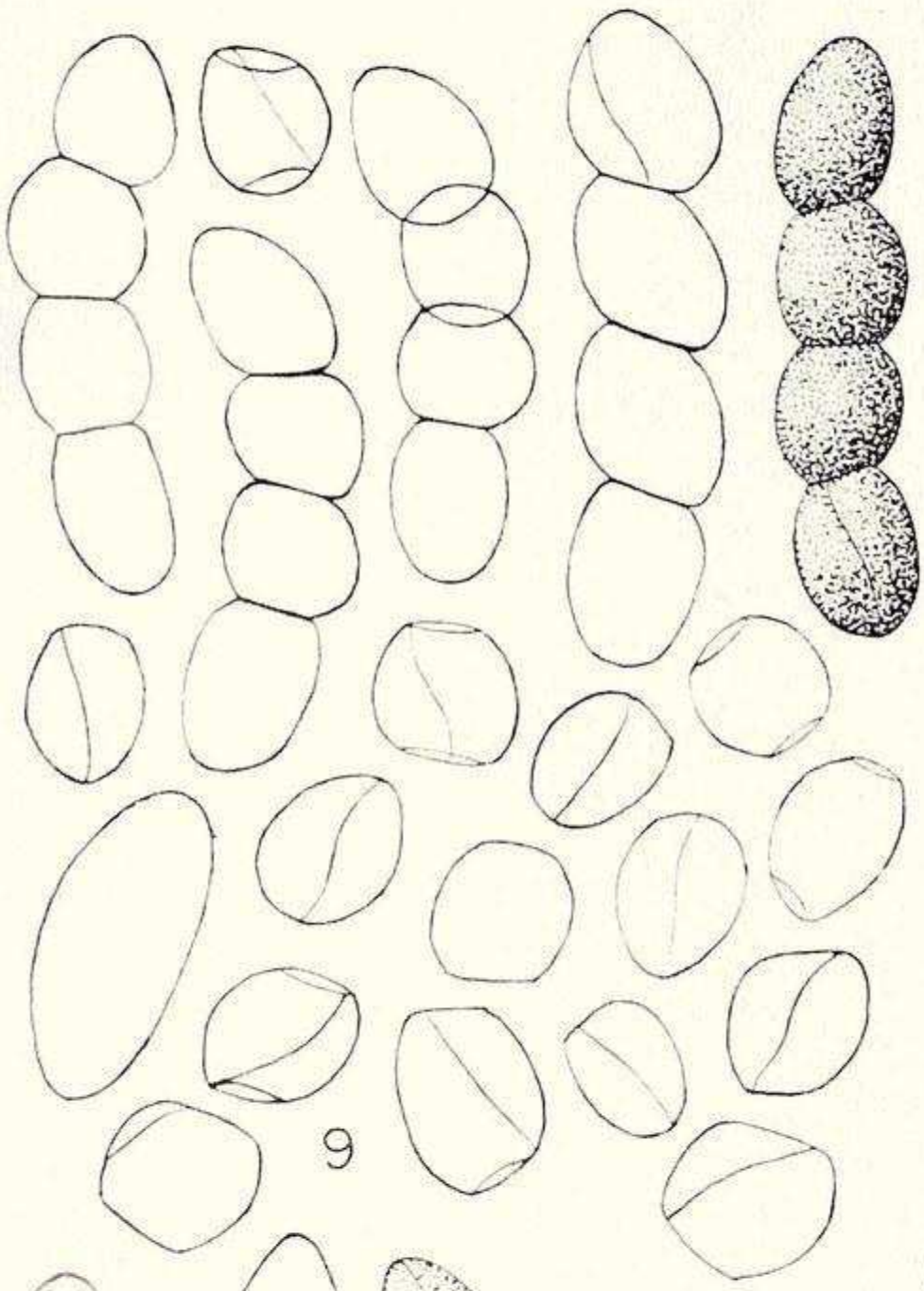
FIGS. 84–95. *Preussia nigra*. All ×1200 (except Fig. 84). Routien, 17M48. FIG. 84. Ascocarp, crushed under cover slip, with asci extruding. ×125. FIG. 85. Surface view of peridium of mature ascocarp showing very distinct cells. FIGS. 86–88. Young asci with croziers at base, before ascospore formation. FIG. 89. Ascus, nearly mature but ascospores still hyaline. FIG. 90. Early stages in development of ascocarp. Swollen cell in hypha divides to form a mass of cells. FIG. 91. Young asci, before ascospore formation, and paraphyses. FIG. 92. Young asci containing hyaline ascospores, in various stages of development. FIG. 93. Mature asci with brown ascospore segments separated (shown in outline only). FIG. 94. Mature asci, end view. FIG. 95. Mature ascus with ascospore segments separated (in lactophenol). FIG. 96. Separated ascospore segments.

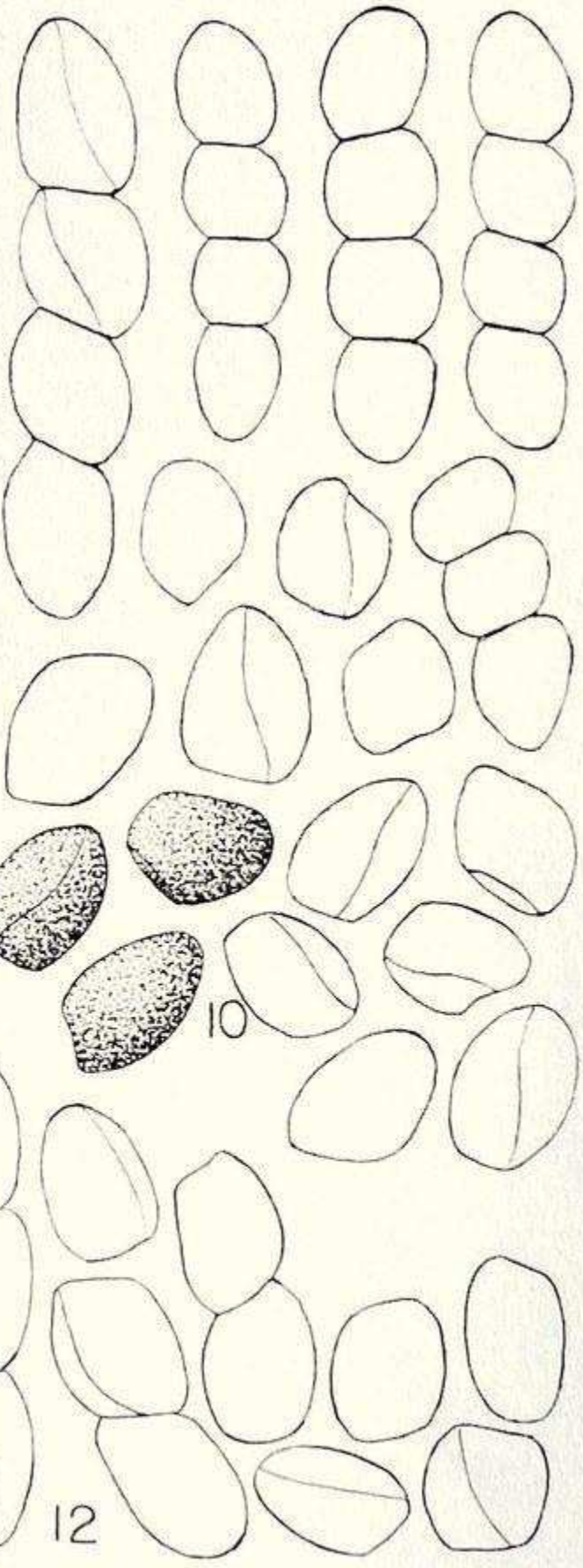
NOTE: Figures 1–96 follow.

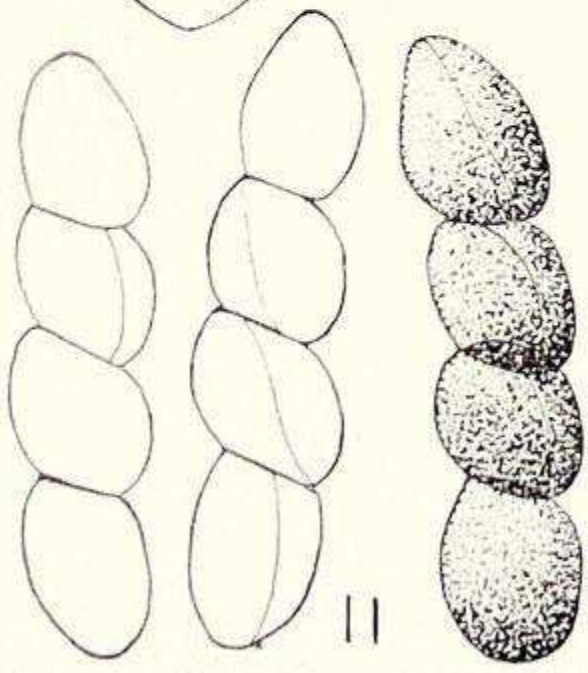
Preussia funiculata (Figs. 1–6)

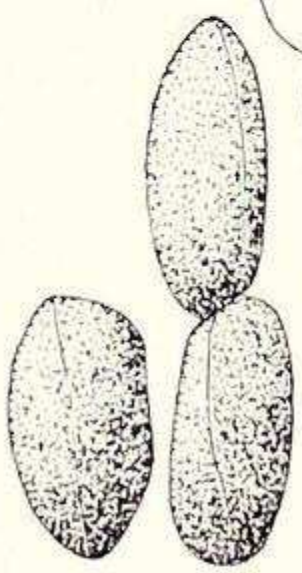


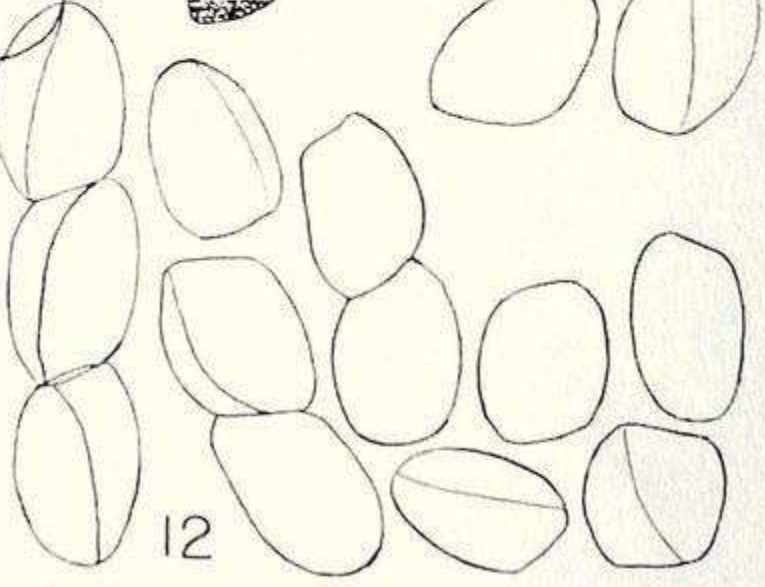




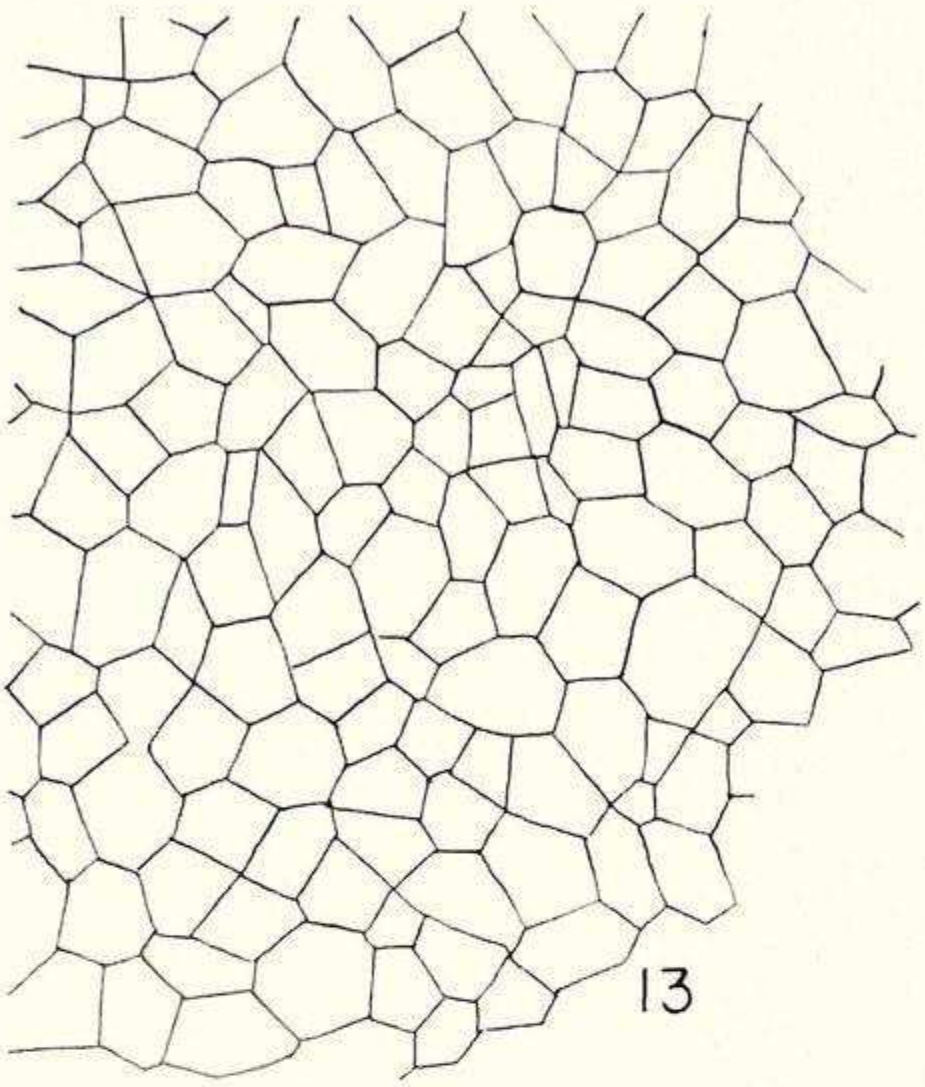








Preussia funiculata (Figs. 7–12)



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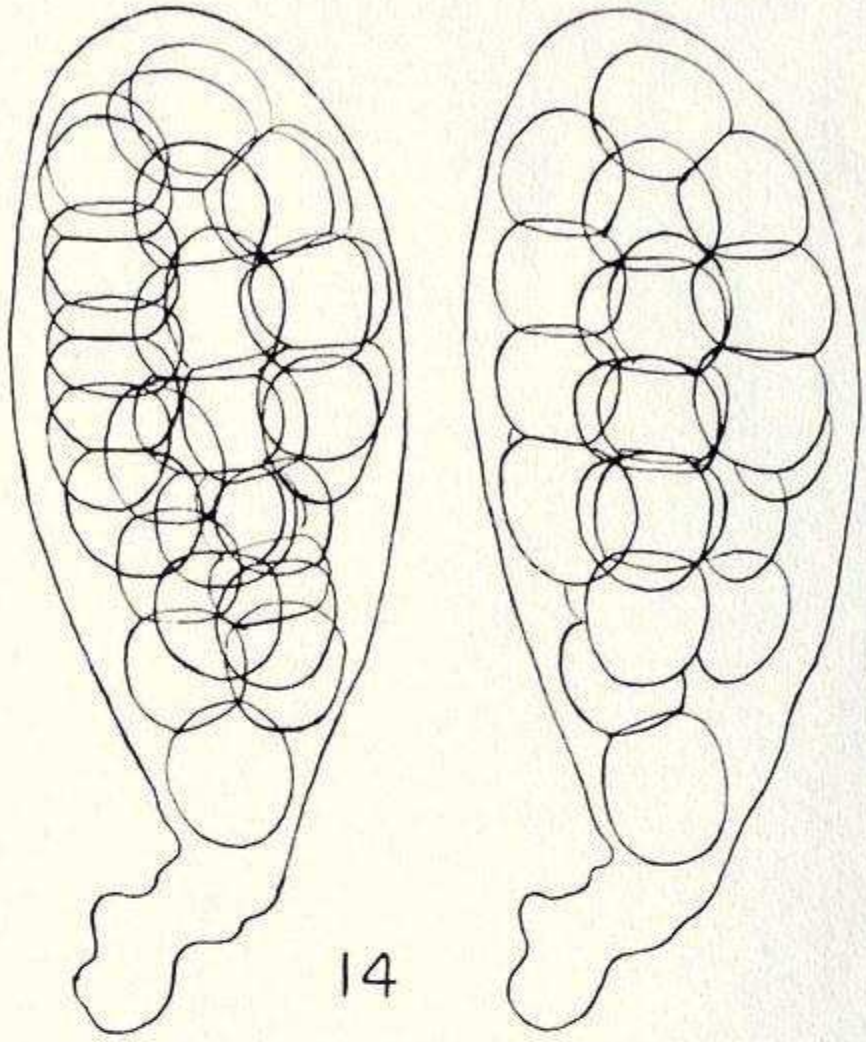

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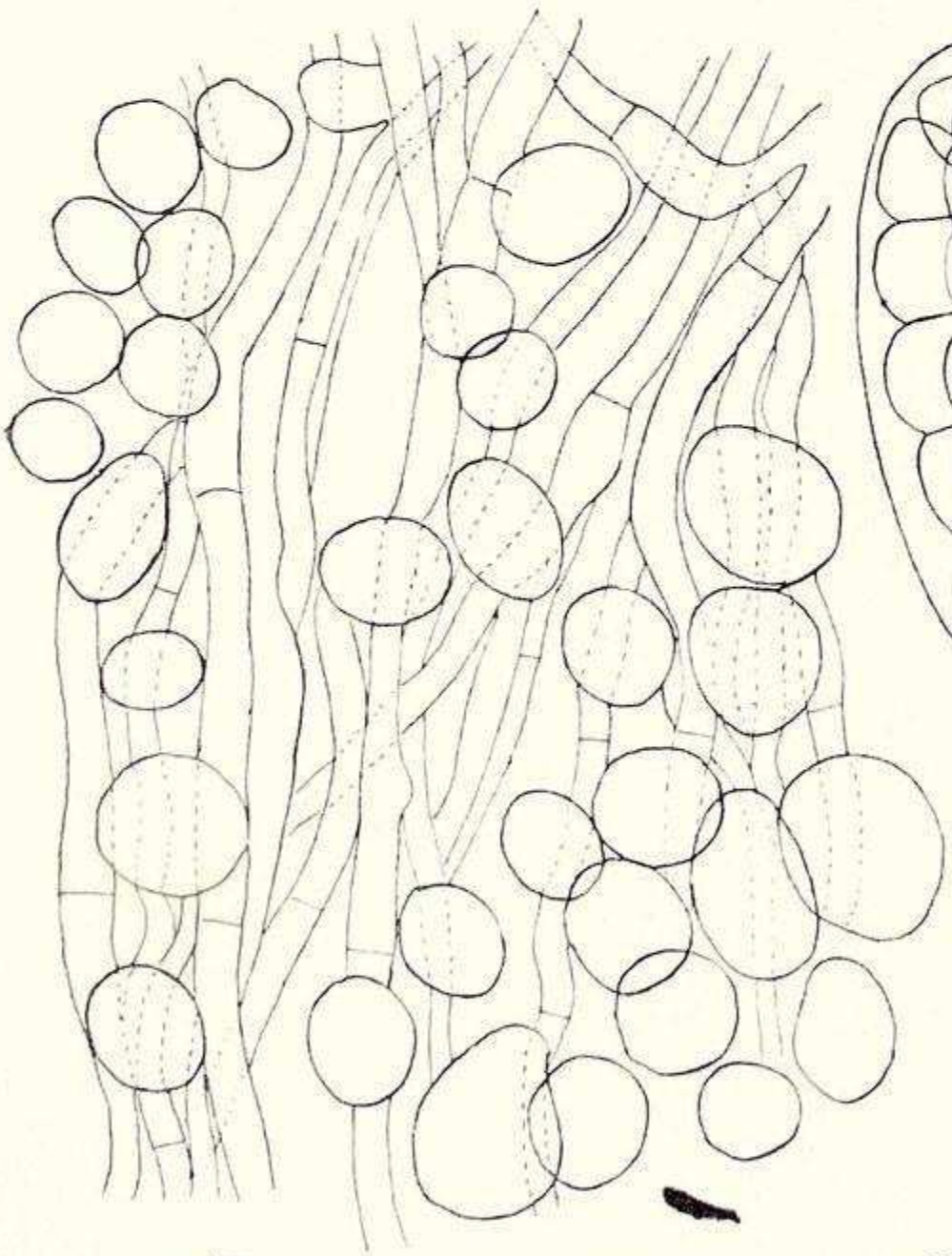

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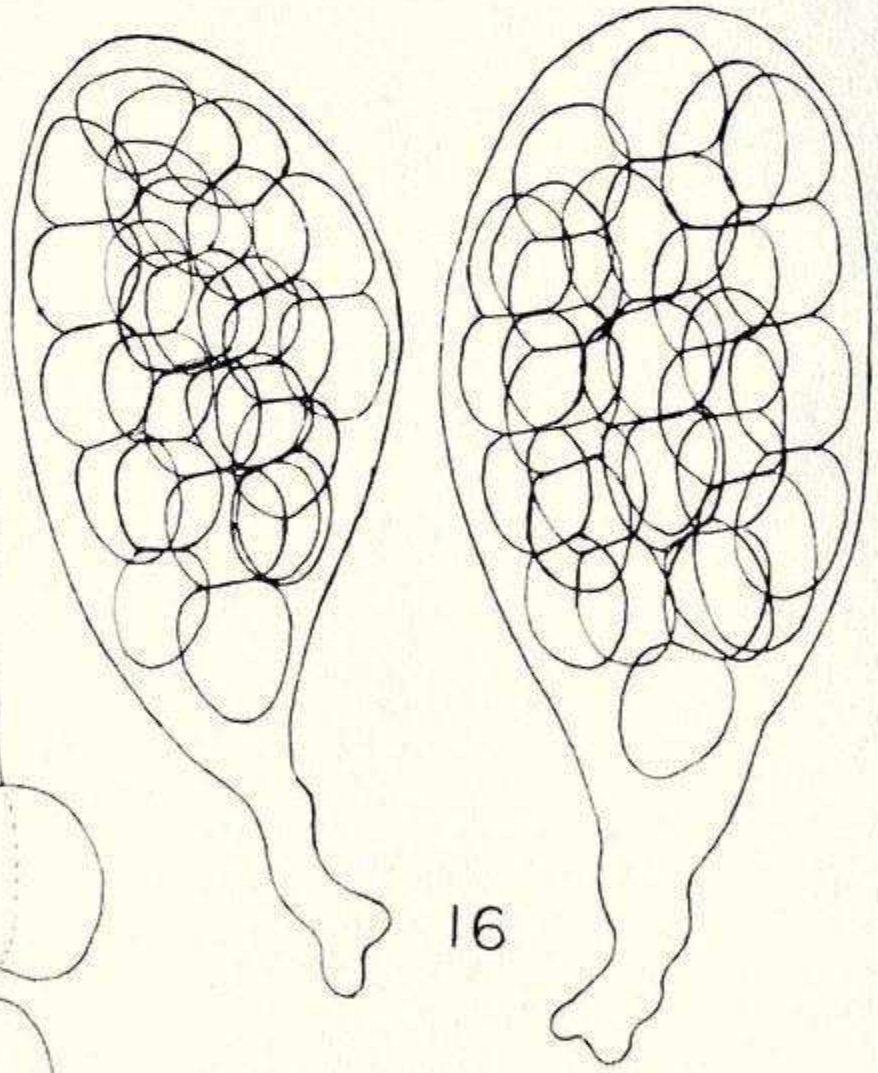

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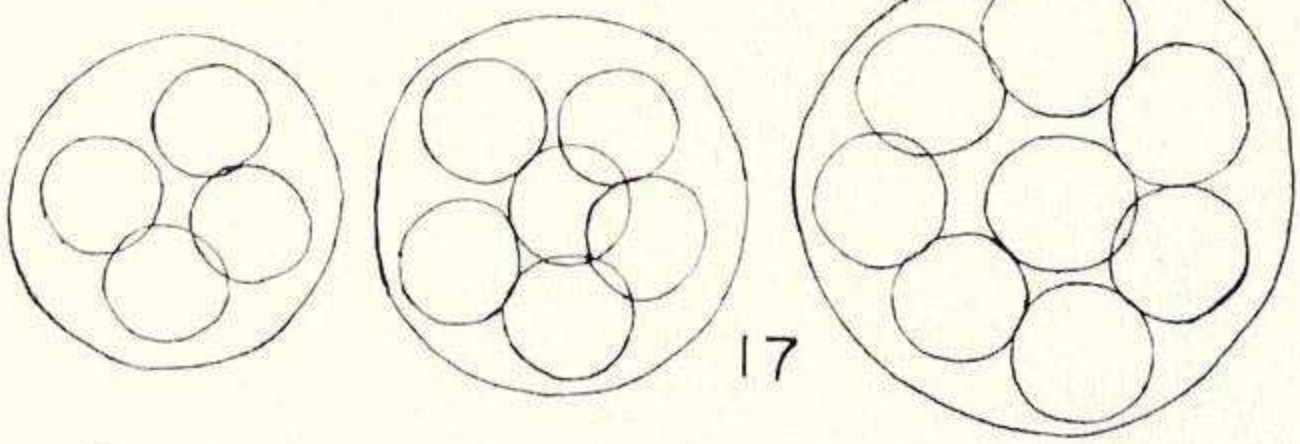

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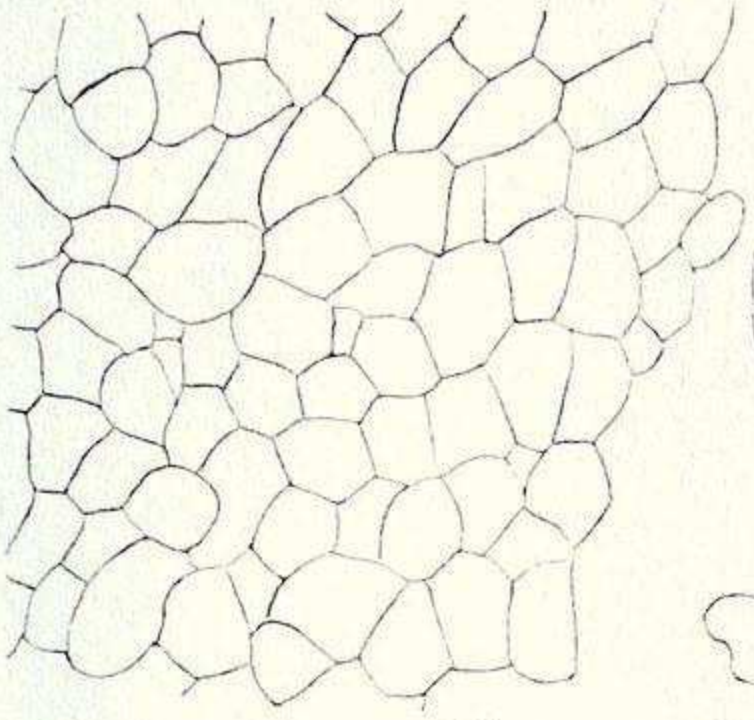
Preussia fleischhakii (Figs. 13–17)



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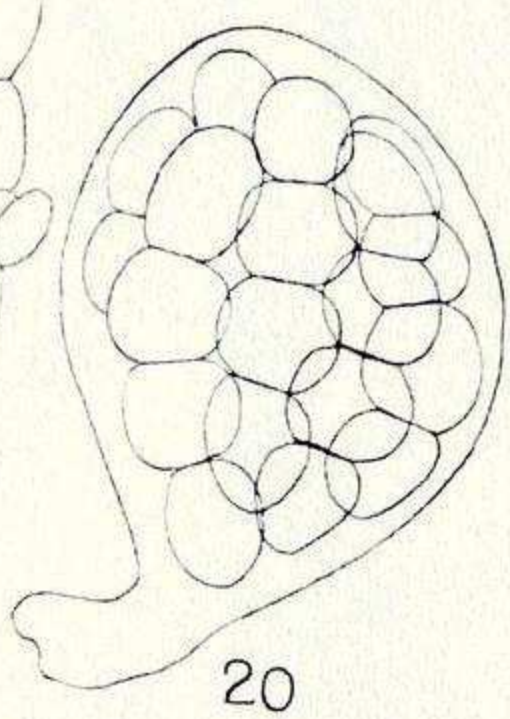

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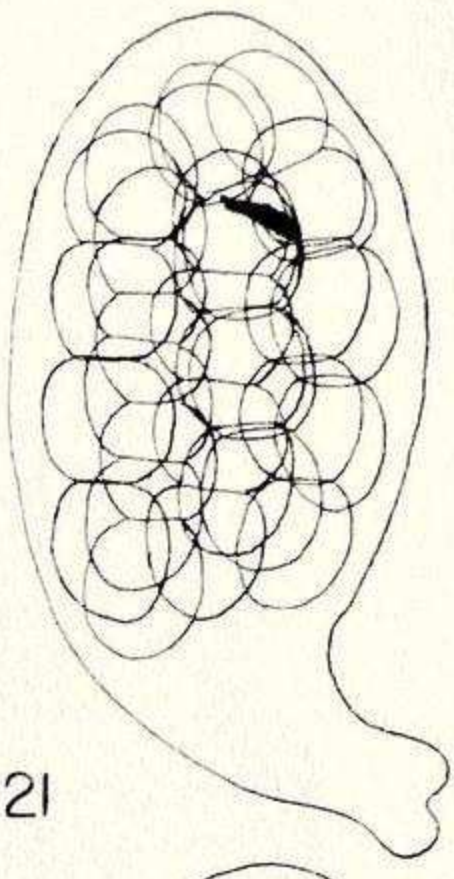

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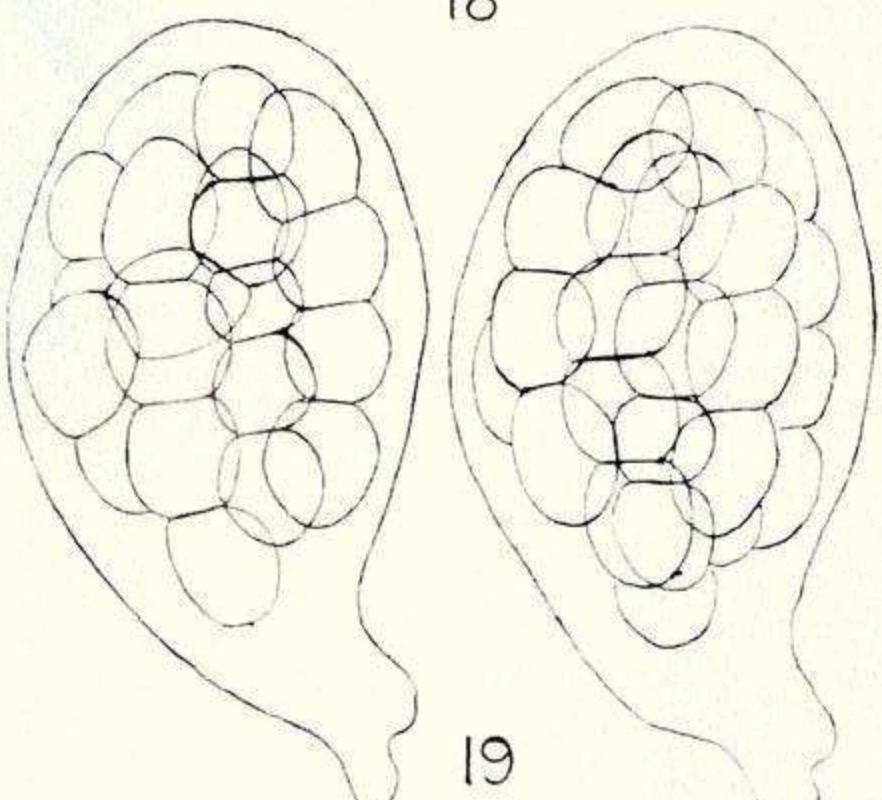

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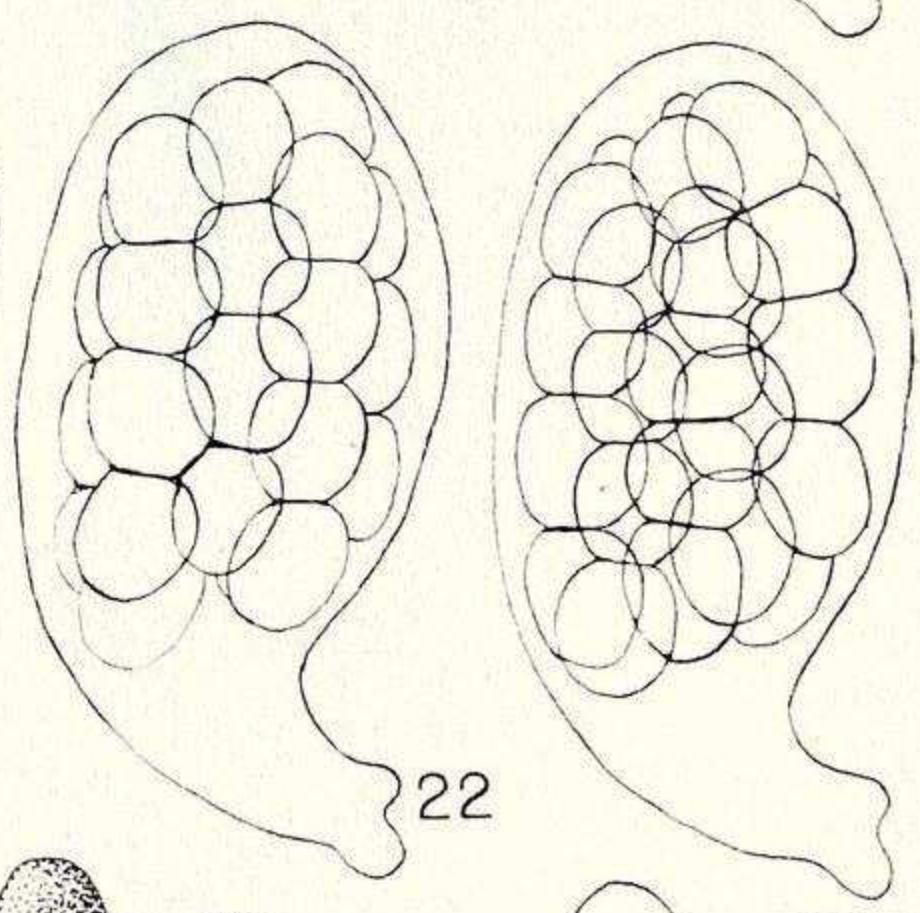

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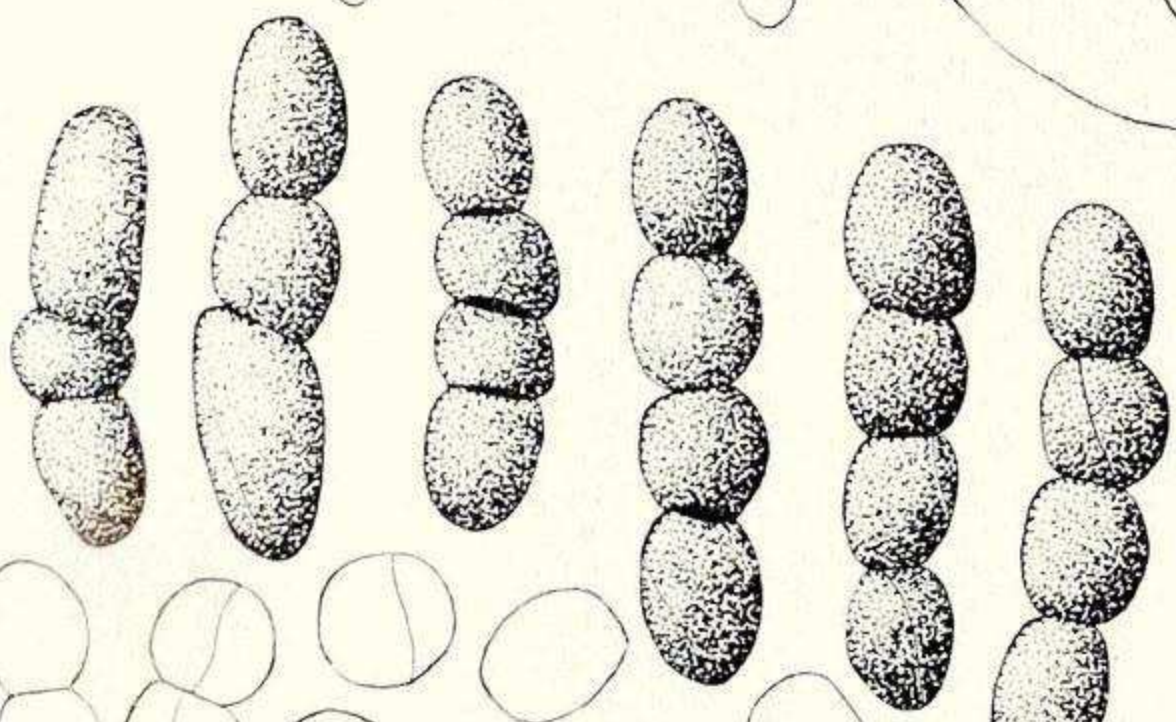

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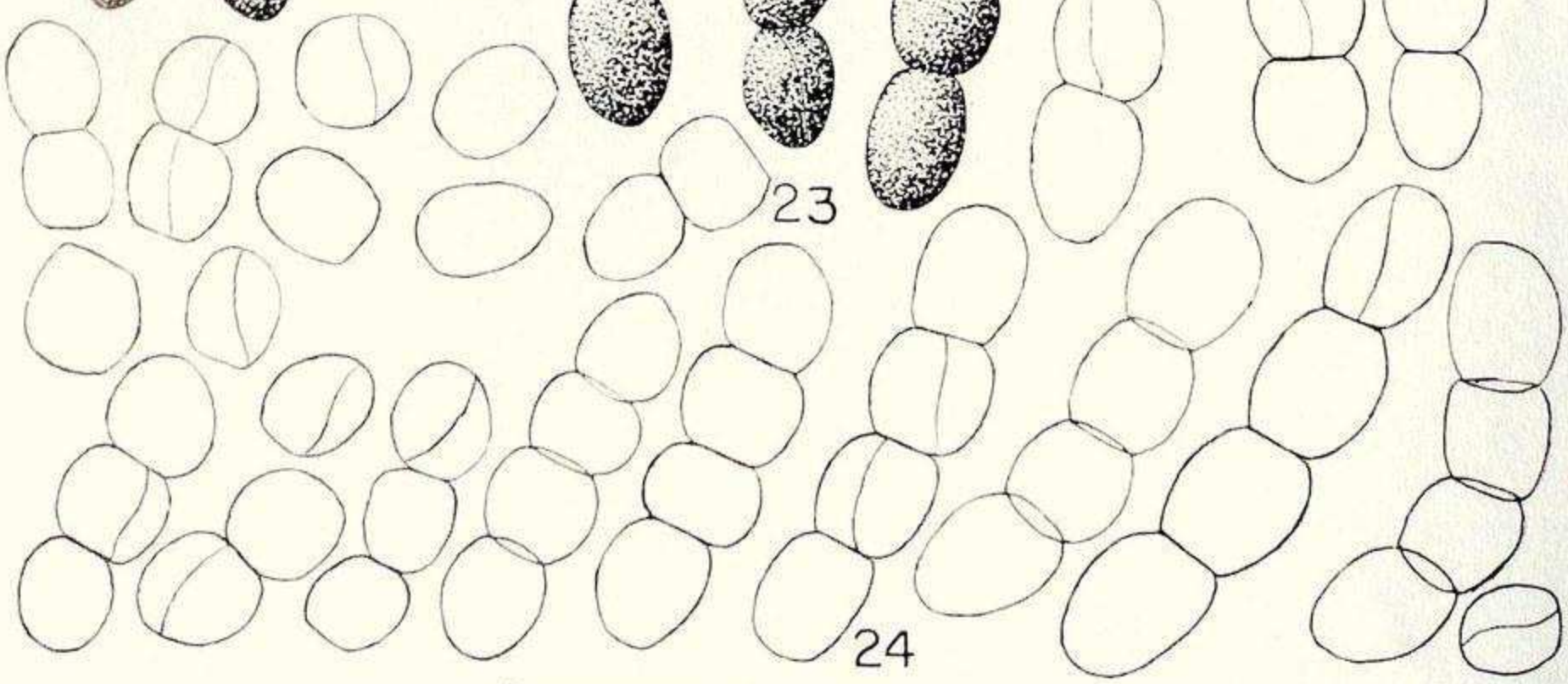

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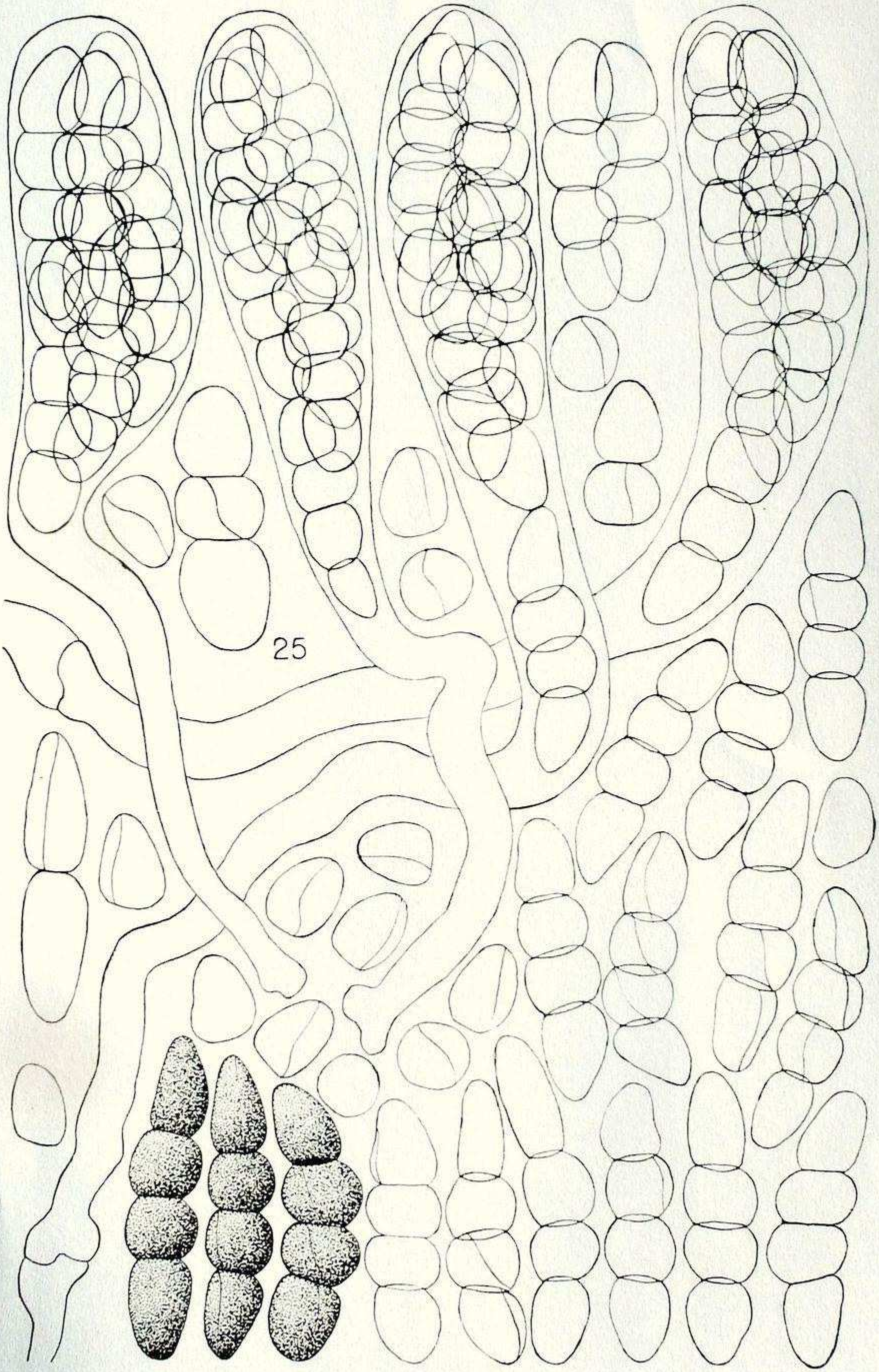
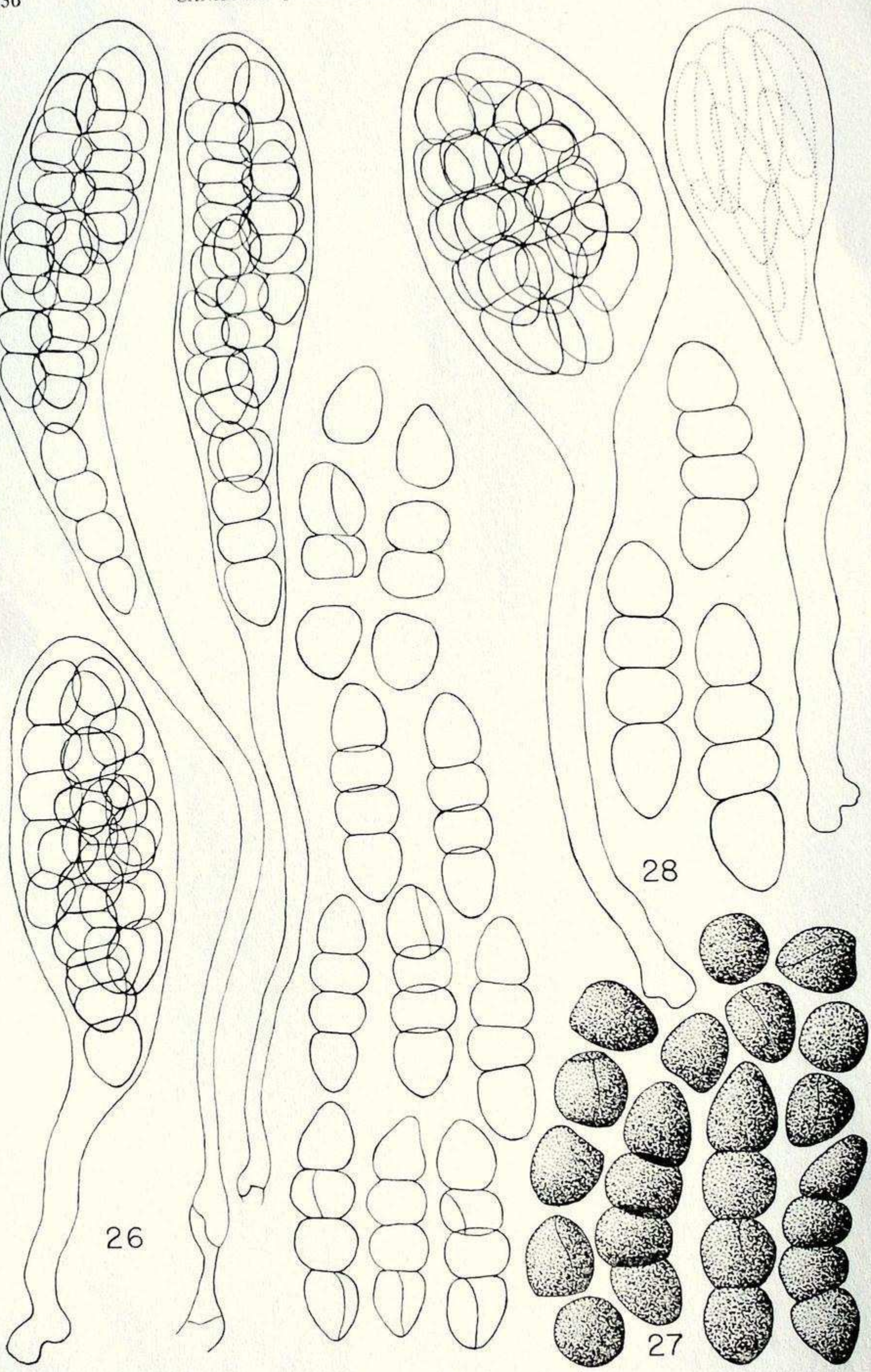
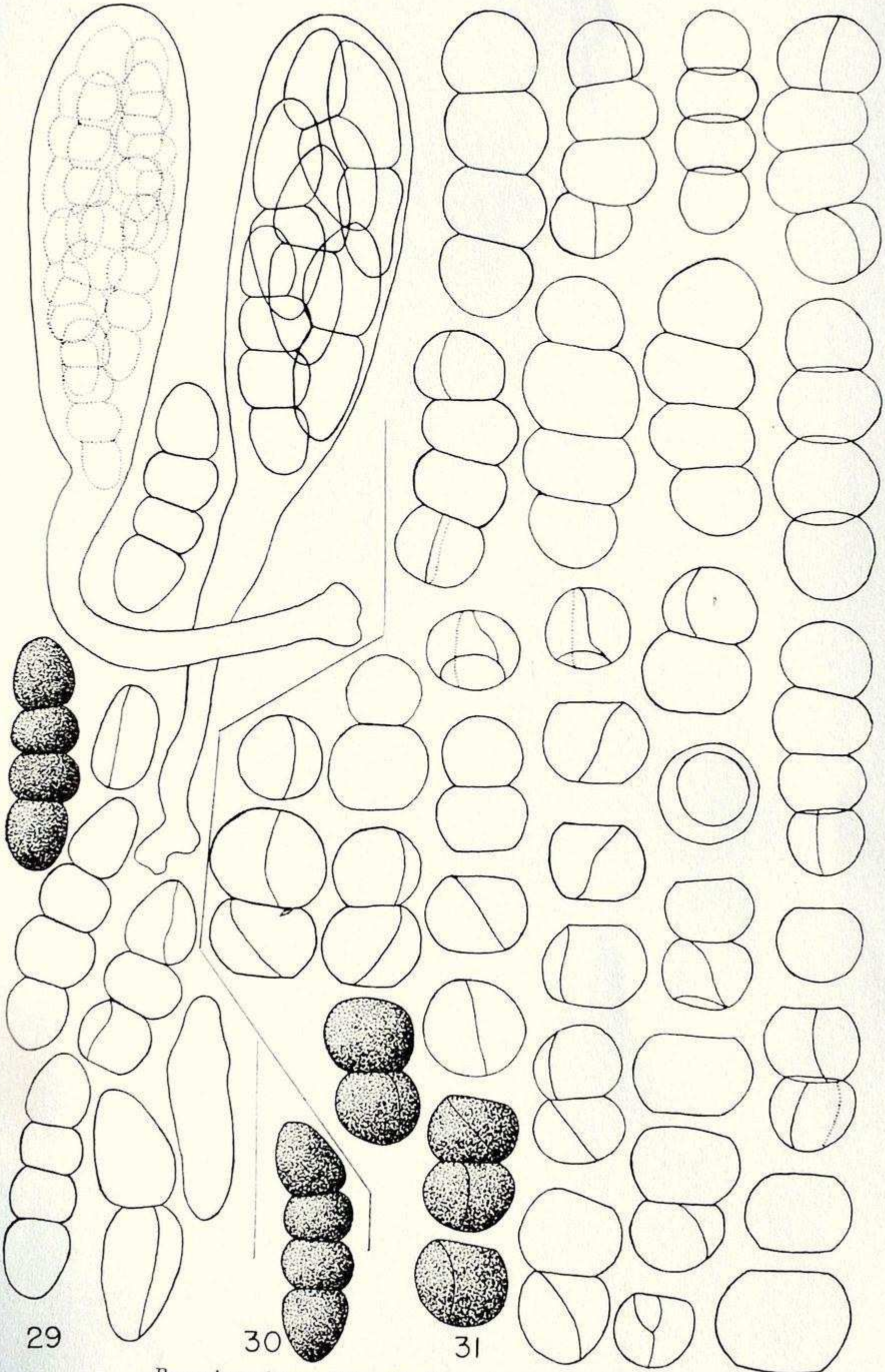
Preussia fleischhakii (Figs. 18–24)



Preussia typharum (Fig. 25)



Preussia typharum (Figs. 26–28)



Preussia typharum (Figs. 29, 30) and *P. punctata* (Fig. 31)