Diagrams

to illustrate Thesis on Protozoa

by

Index.

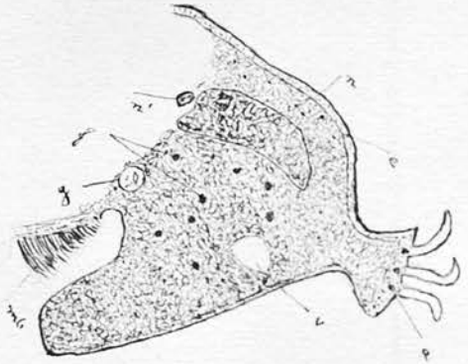


Fig. 11.

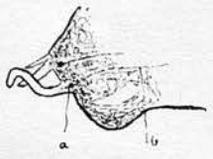


Fig. 13

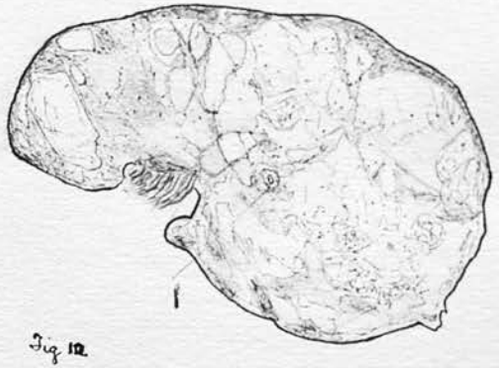


Fig. 12

Fig. 11. Portion of transverse section of Stylonichia with slight extreme lateral distortion (×1000) Lettering as in 8. n' micronucleus? g food vacuole.

Fig. 12 Complete section through Stylonichia pust. (×625) shewing alveolar structure, refractive particles & portion of membrane. g food vacuole.

Fig. 13. Portion of section transverse of Stylonichia pust. (×1000) shewing fibril (b) in connection with swelling (a) at base of cirrus.

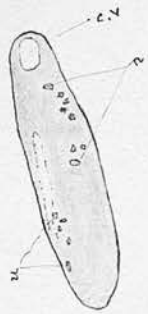


Fig. 1

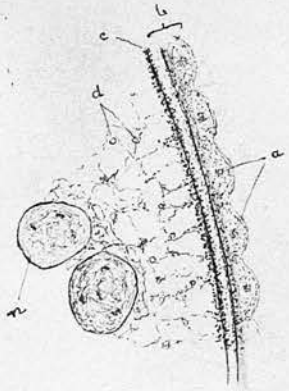
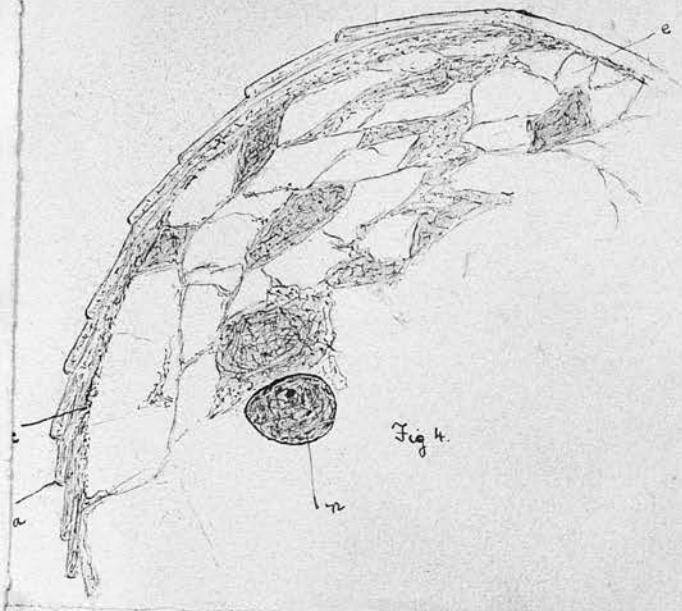


Fig. 2



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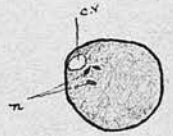


Fig. 3

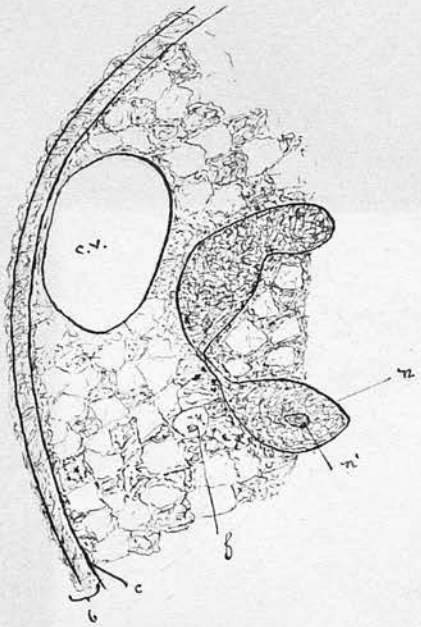


Fig. 5

Fig. 6

Fig. 7

Fig. 9

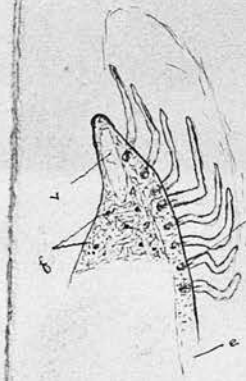
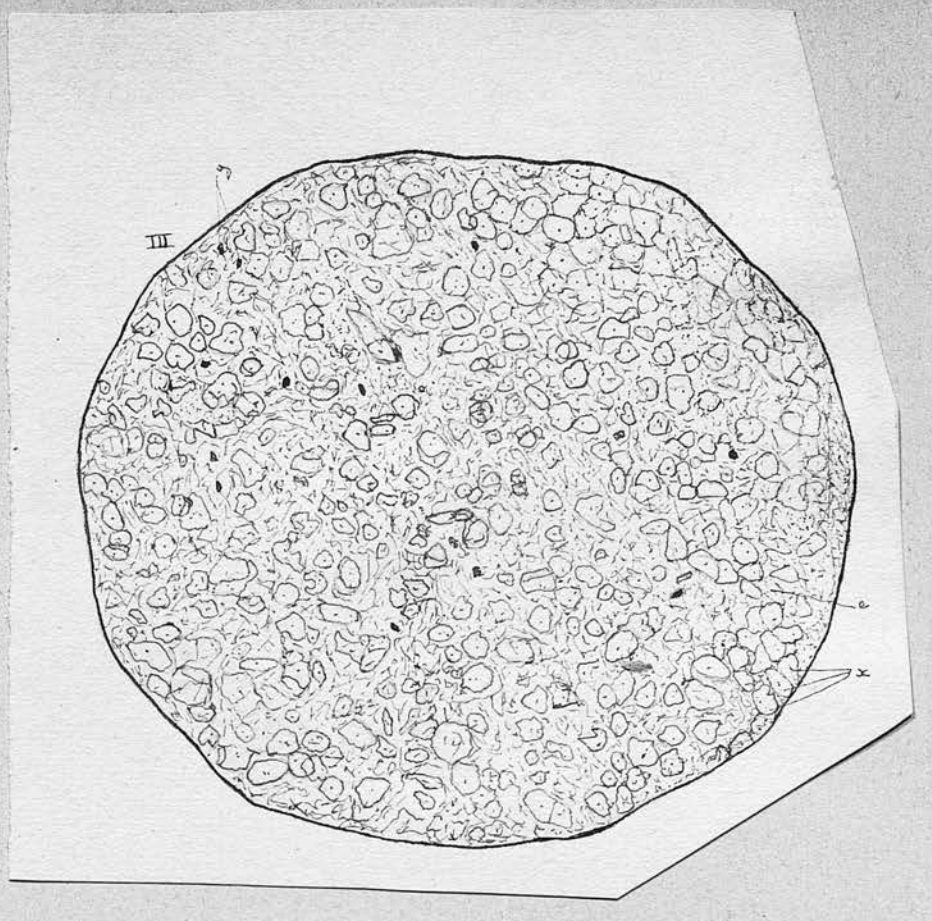
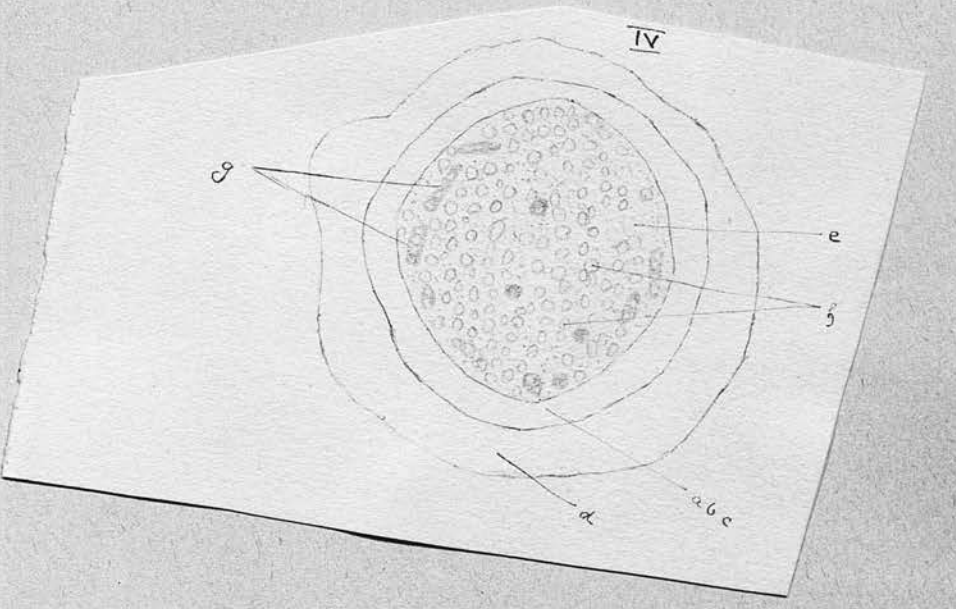


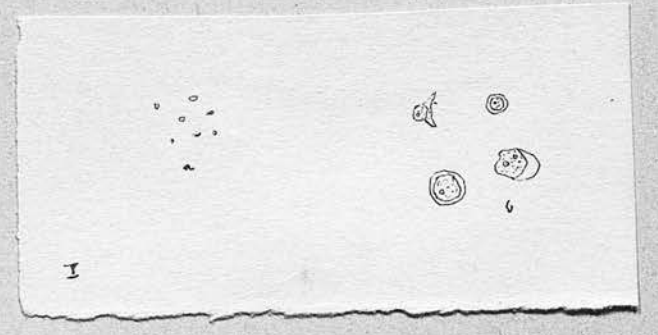
Fig. 8

Fig. 10

Fig 1. Longitudinal Section of Spirostomum ambiguum (x165) n nucleus (Sections through long ribbon-like macronucleus) c.v. contractile vacuole.
Fig. 2. Part of the same enlarged (x625) a dense masses of substance (see text) b ectoplasm c outer layer of endoplasm d refractive excretory(?) part.
Fig. 3. Transverse section of Spirostomum: lettering as before.
Fig. 4. Part of another transverse section (x1000) a section through the sloping longitudinal ridge e vacuolar space
Fig. 5 Part of fig. 3 enlarged (x625). Lettering as before. The entoplasm is more condensed than in 4 & the vacuolae are not so prominent. Here as always the reticular meshwork is closer round the nucleus. n' nucleolus? f food vacuole.
Fig. 6. Longitudinal section of Stylonichia fraticulata shewing vacuolae & cirri. (x105)
Fig. 7 The same, nearer the median line shewing double macronucleus.
Fig. 8. Anterior portion of long. Section of Stylonichia. e ectoplastic layer. a swelling at base of cirrus. v vacuolar space in otherwise dense reticulum
Fig. 9. Portion of macronucleus of fig. 7. (x1020) shewing Binucleoplasts. Each has a darker centre, ~~centrum~~ a refractive body, with a clear space around it. (in this region) & secretory granules
Fig. 10 Transverse section of Stylonichia (x105) mb membranella. p.m. parietal membrane e.m endoral membrane. c cirri.







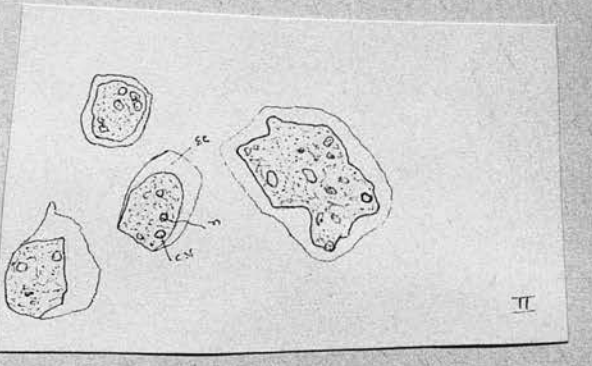


Fig I Spores of Amoeba proteus within 1 hour of liberation c x106 b x625

Fig II " " " " " 3 days " " (x625.) ec ectoplasm ex contractile vacuole n nucleus

Fig III Ripe sporulation cyst of Amoeba proteus (x625): the wall is now exceedingly thin. x individual spores. y dark probably excretory masses, e plasma of the cyst.

Fig IV Section of sporulation cyst (after Scheel) a,b,c cyst wall, d gelatinous coat; e plasma of the cyst: b albuminous spheres g nuclei (x440).

Fig. 5.

Fig 1.

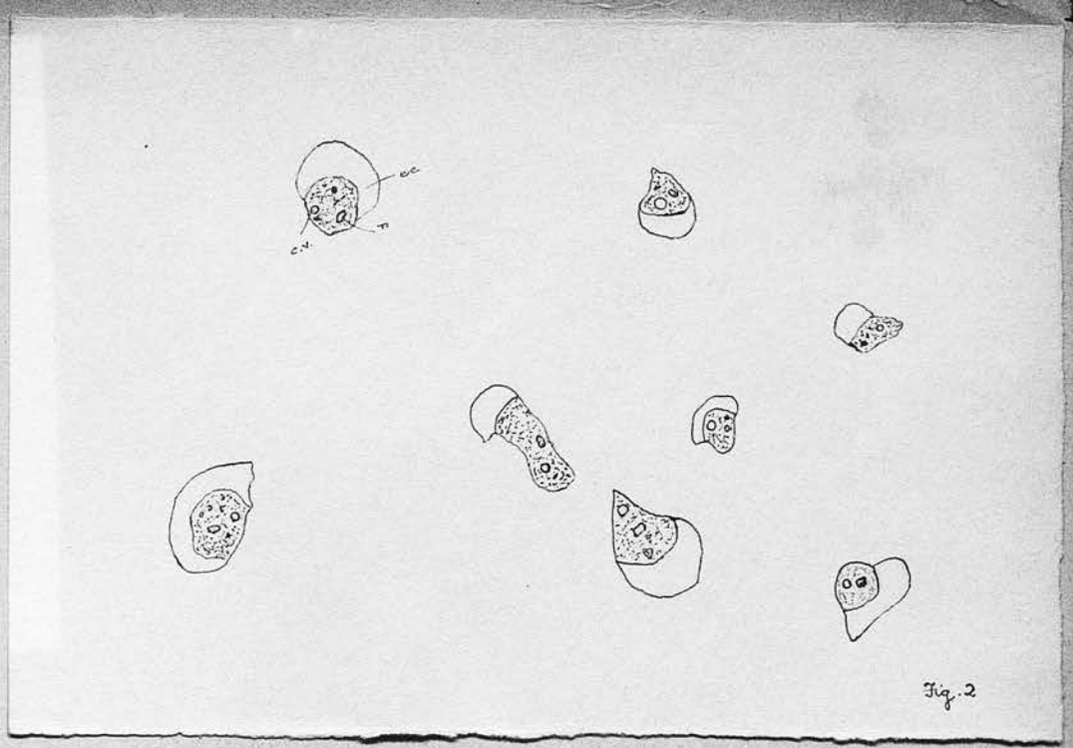


Fig. 2

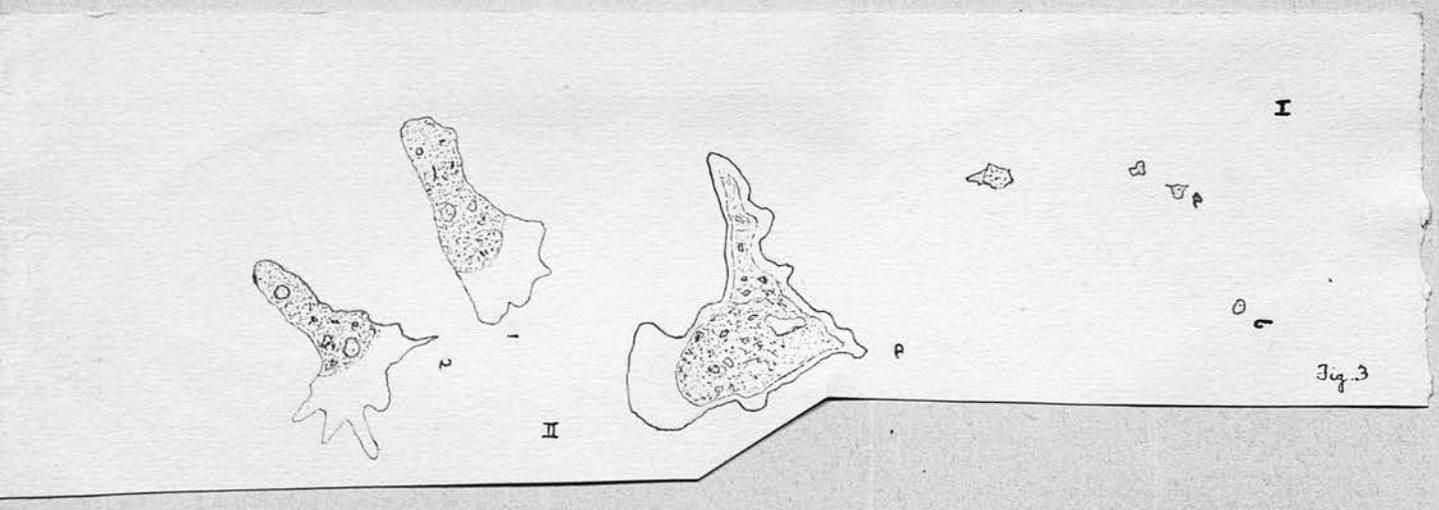


Fig. 3

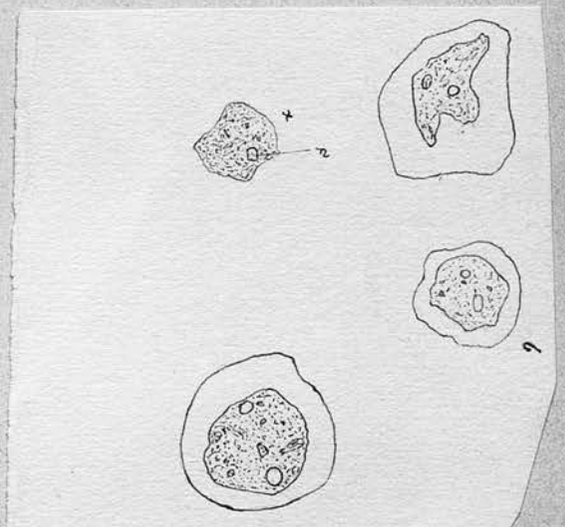


Fig. 4

Fig. 1. Fragmentation(?) of Amoeba princeps within 12 hours of process (x105) x small amibes p. Remains of motionless.

Fig. 2. Amoebae produced by fragmentation(?) on the 3rd day (x625). c.v. contractile vacuole n nucleus ec ectoplasm.

Fig. 3. I Amoebiae photos within 8 days of formation. (x105) II a corresponds to a of I, only x625. 1+2 represent the same individual at an interval of 45 seconds.

Fig. 4 Continuation of 3. b corresponds to b, only x625. x is fixed + stained. The sharp distinction between ecto. plasm & entoplasm at the concave of the former over the latter may be remarked. x has been fixed & stained.

Fig. 5. Fragmentation of Amoeba princeps within 12 hours probably of process of an individual (x625)

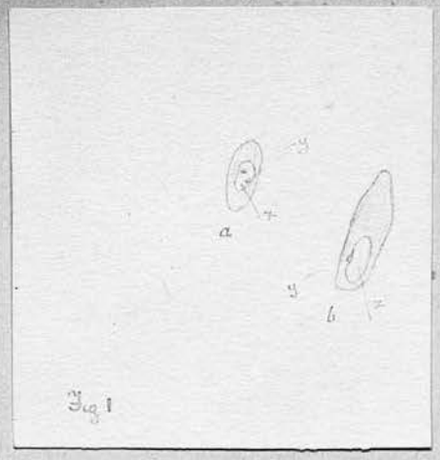


Fig 1

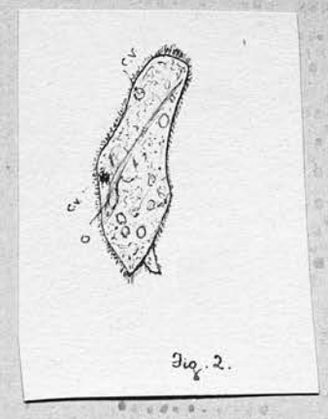


Fig. 2.

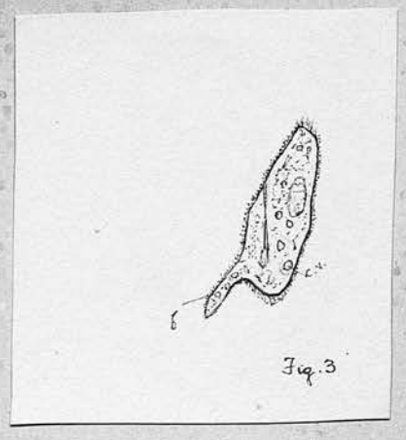
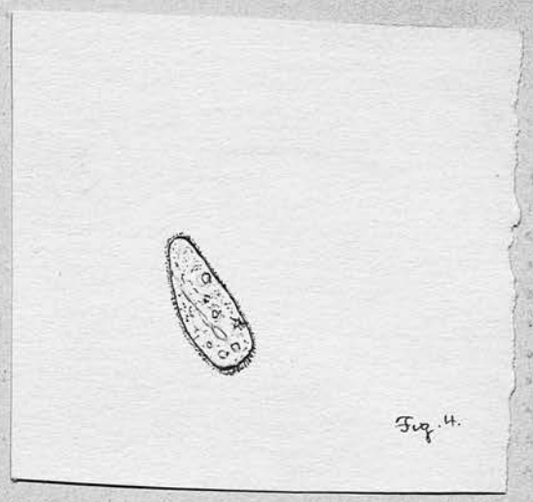


Fig. 3



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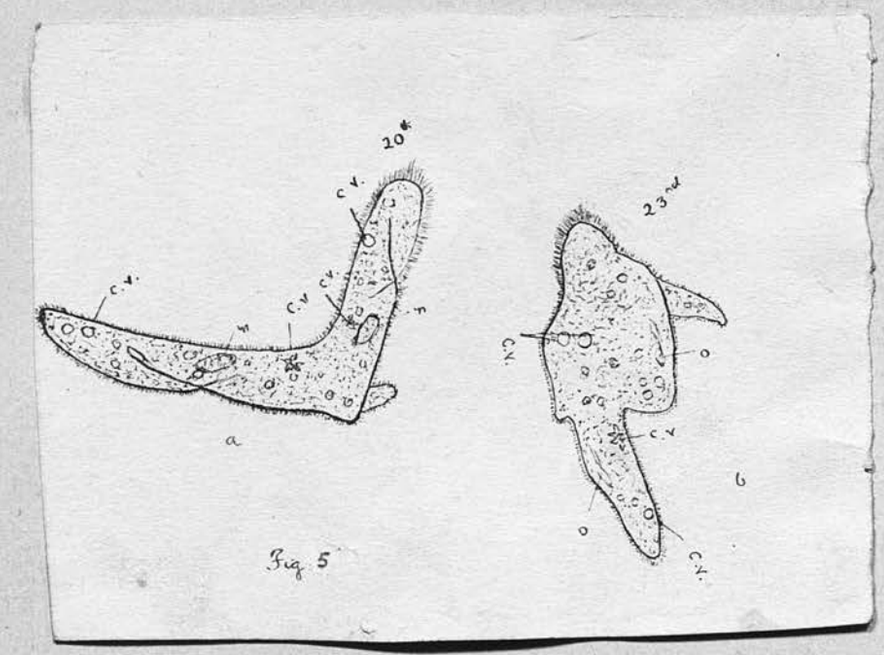


Fig 5

Fig. 6.

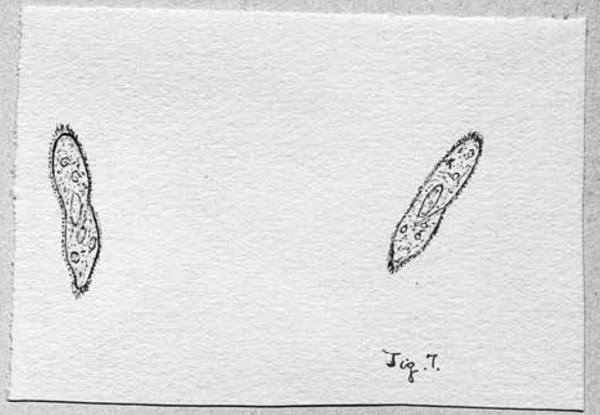


Fig. 7.

Fig 1. Mounted specimens of Paramecium aurelia (a) & Paramecium caudatum (b). x macronucleus y micronucleus. (X 105)

Fig. 2. Paramecium (caudatum) with cleft tail: ventral aspect. C.V. contractile vacuole. o mouth.

Fig. 3. The same later: dorsal aspect: food vacuoles (flare observable in the process.

Fig 4. Paramecium like aurelia given off from anterior half of cleft-tail individual.

Fig. 5. Double Paramecium monster (see text.) Observe elongated cilia in the anterior region. b the same, three days later.

Fig. 6. Paramecium caudatum: products of a binary fission: observe dissimilarity in shape. Not drawn, however, at quite the same angle.

Fig. 7. Another pair similar to 6. Note peculiar bend in outline of left individual.

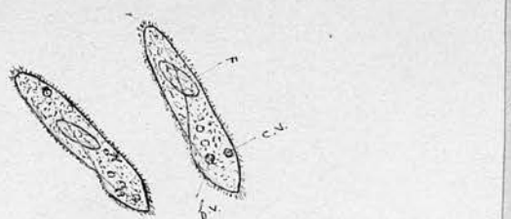


Fig. 1

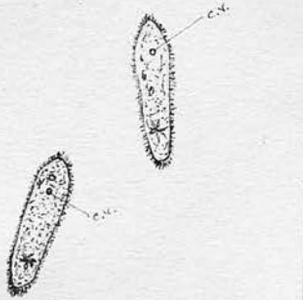


Fig. 2.

Fig. 3

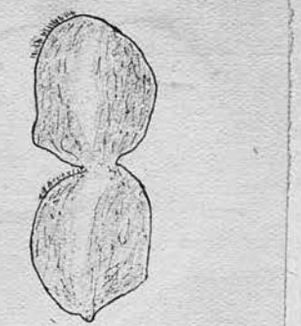


Fig. 4

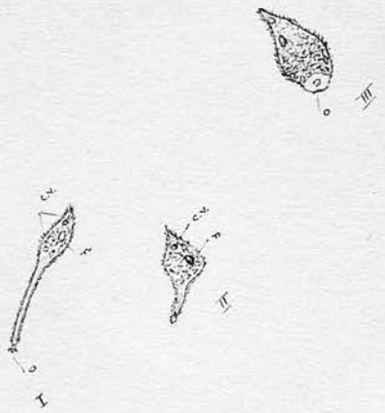


Fig. 5.

Fig. 6

Fig. 1. Paramecium caudatum: products of a binary fission, from the same (ventral) aspect, shewing differences in shape. c.v. contractile vacuole. n. nucleus (macro-
Fig. 2. " " : " " " , from the dorsal aspect, " " " f.v. food vacuole. (x105)
Fig. 3. Stylonichia pustulata: " " " , " ventral " "
Fig. 4. Urostyla grandis: young specimen dividing: variation in shape at early as well as later stages
Fig. 5. Lacrymaria. I, II, III represent different stages previous to encystment. I as the creature ordinarily appears. II resting, temporarily, as previous to encystment. III mouth & neck completely withdrawn. o mouth. (x105).
Fig. 6. Two Stylonichia in conjugation, the one applied laterally, the other ventrally (see text.)

Fig. 1

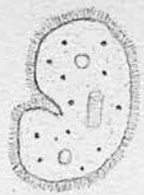
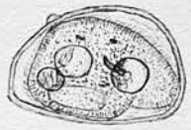


Fig. 2

Fig. 3



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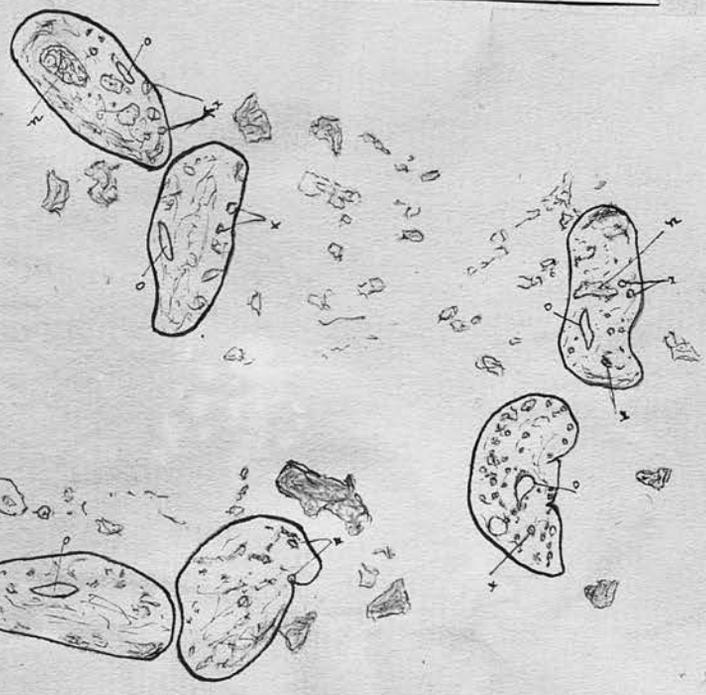

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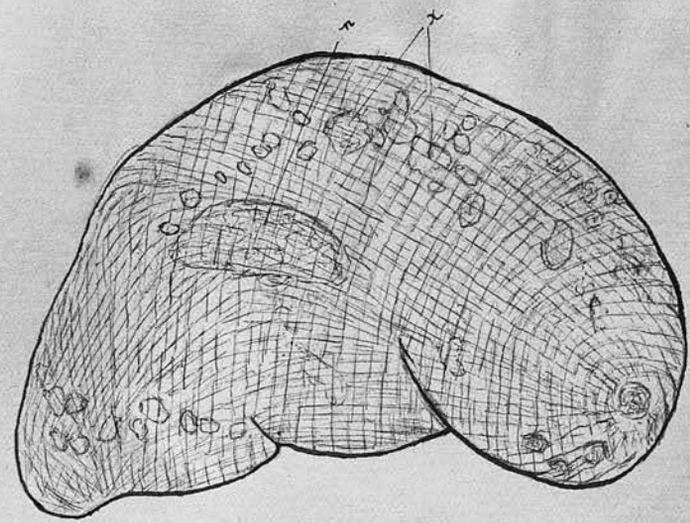
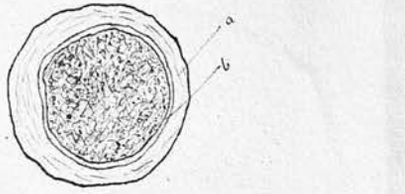
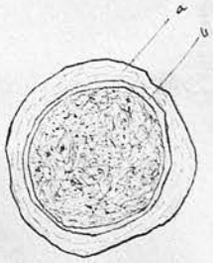


Fig 6.

Fig 1. Paramecium putrinum (after Lindner)
" 2. Encysted Paramecium (" ")
" 3. Cyst of Paramecium bursaria (after Prowazek)
" 4. Cyst of Paramecium caudatum (x 105)
" 5. Group of dried Paramecium caudatum (x105): diagrammatic. o oral aperture. x shining excretory particles n nucleus
" 6. Dried Paramecium enlarged (x625) showing body striping: lettering as in 5.





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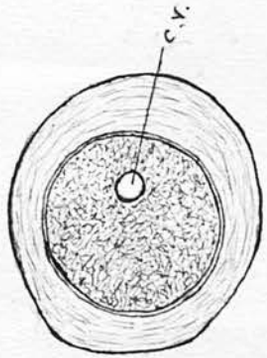
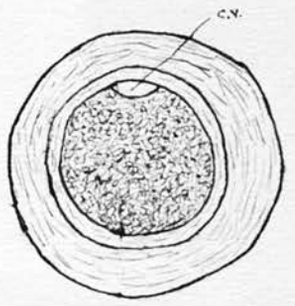


22 hrs.



24 hrs.

Fig. 6.

Fig. 6. Cyst of Oxytricha fallaciella shewing growth in inner wall over 48 hours. (see text.)

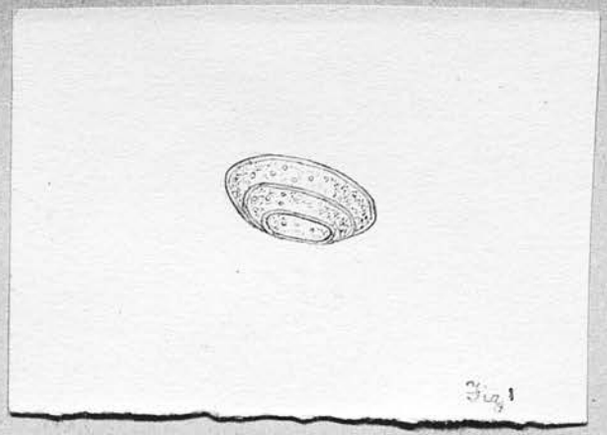
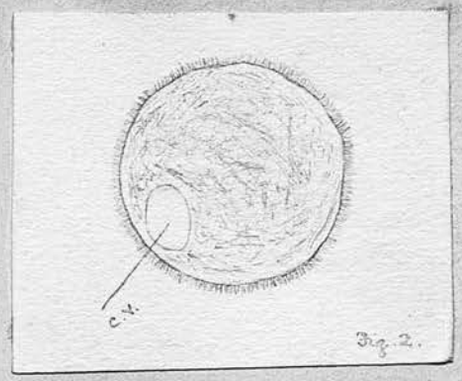


Fig. 1



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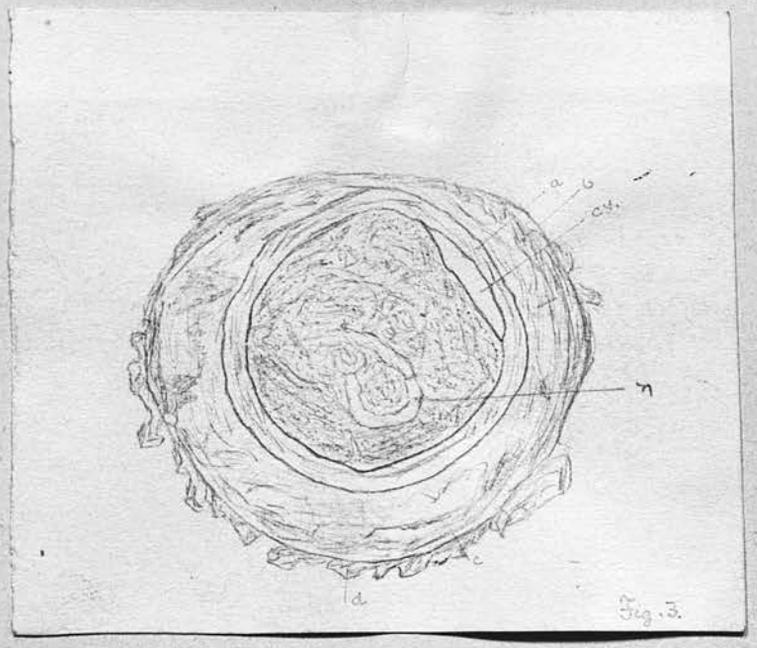

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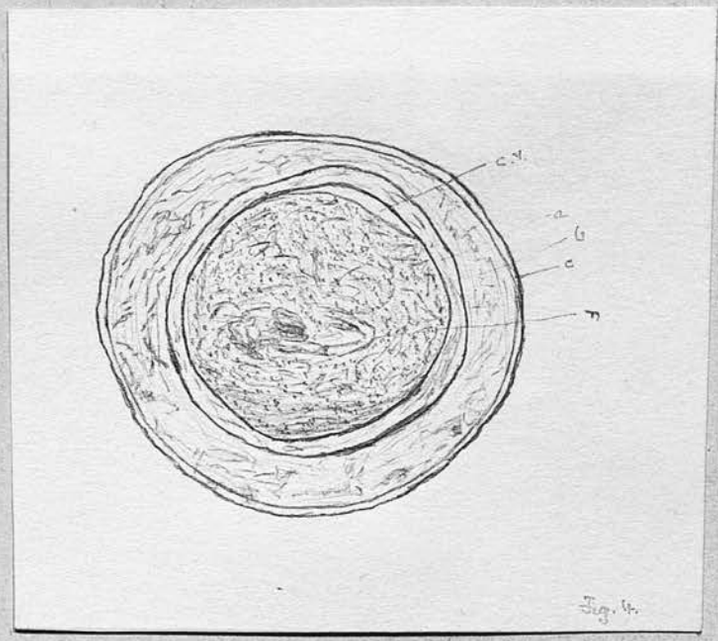


Fig. 4.

Fig 1. Supposed cyst of Spirostomum ambiguum Ehrbg. sp. (× ca 150)

Fig. 2. Spirostomum ambiguum assuming spherical form previous to encystment: c.v. contractile vacuole.

Fig. 3. Cyst of Spirostomum ambiguum (ca 625) n band-like nucleus. a b c three walls of cyst. d vegetal detritus etc. adhering to outer cyst-wall. c.v. contractile vacuole.

Fig. 4. Another cyst, clearly showing 3 walls.

Fig. 5. Cysts of Lacrymaria olor. (× 625). a outer b inner cyst wall.

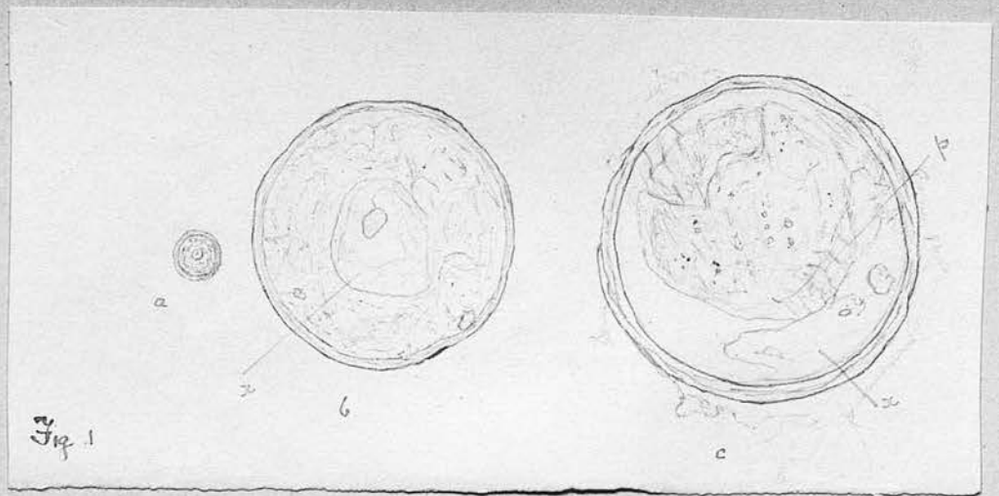


Fig 1

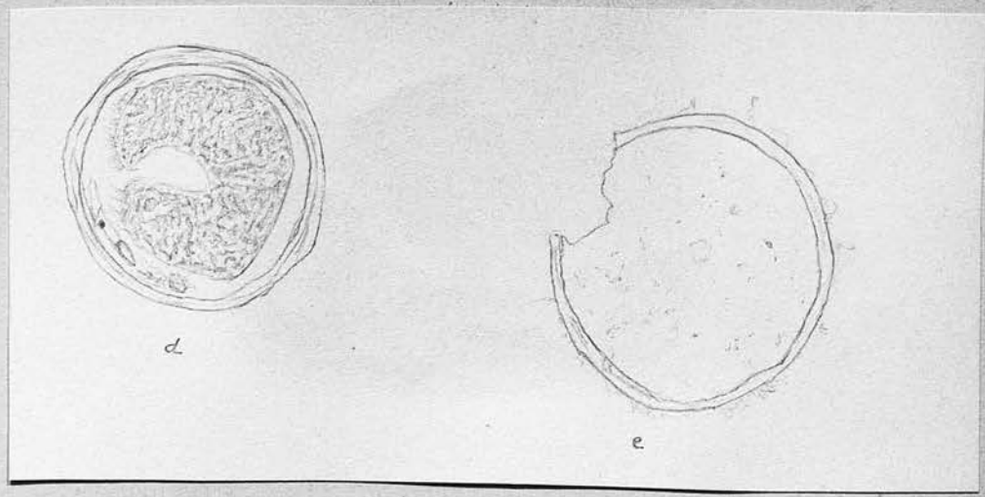
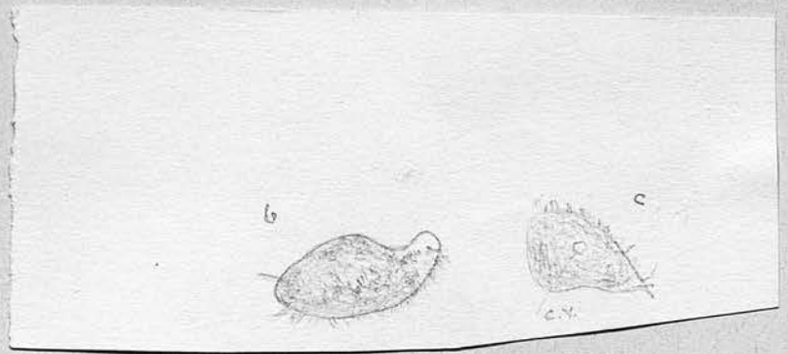


Fig 2



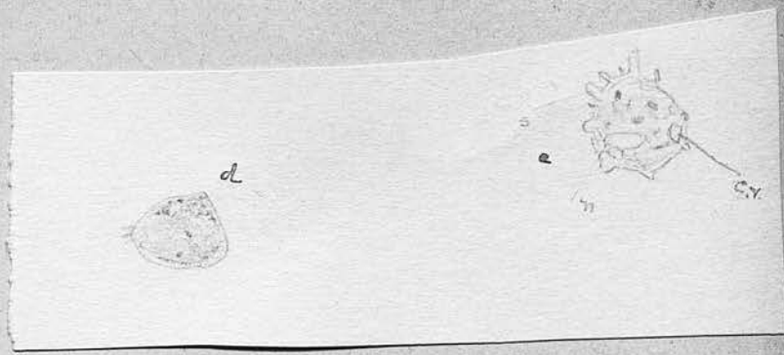
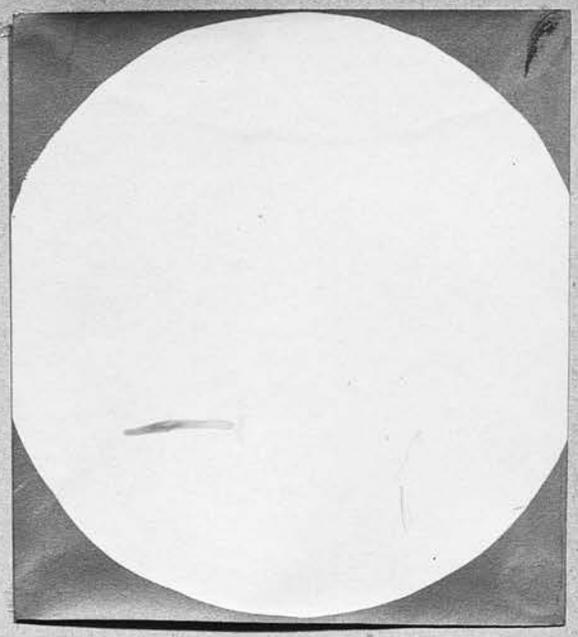


Fig 1 Encystment of Urostyla grandis. a, b, c, d, represent successive stages just previous to escape a cyst x105 b the same x625 x excretory mass lying free in cyst. c later stage of reformation p peristomal area. e empty cyst.

Fig 2 Successive stages in encystment of Stylonichia pust. C.V. contractile vacuole. S spines representing old cuticle. n nucleus

Fig. 1

Fig. 2



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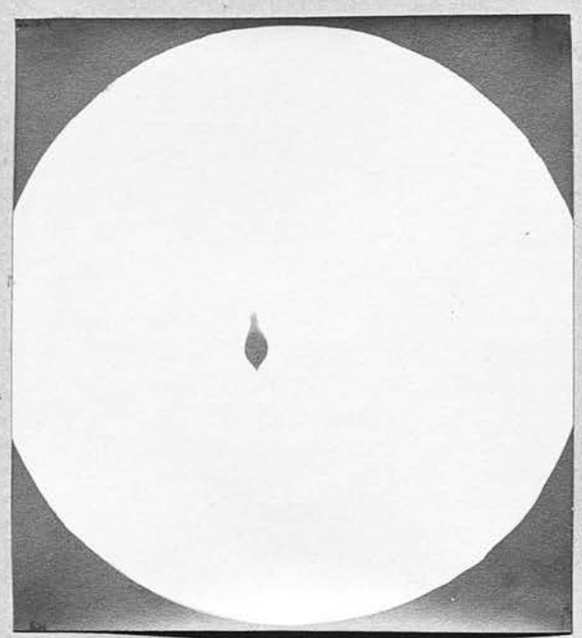


Fig. 4

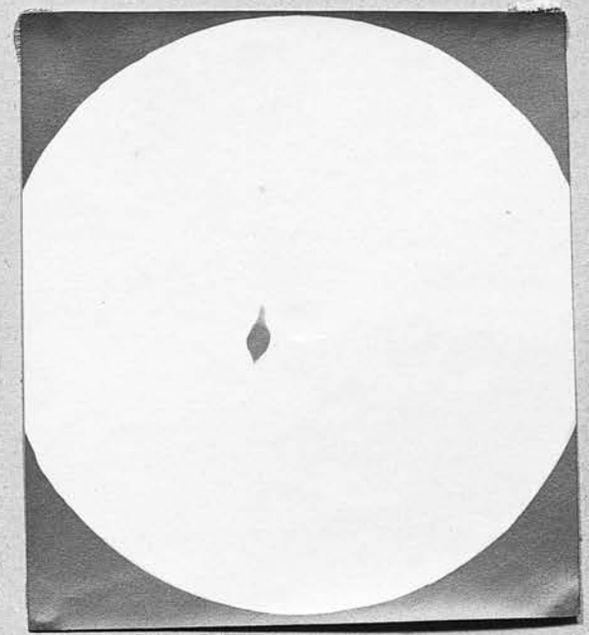
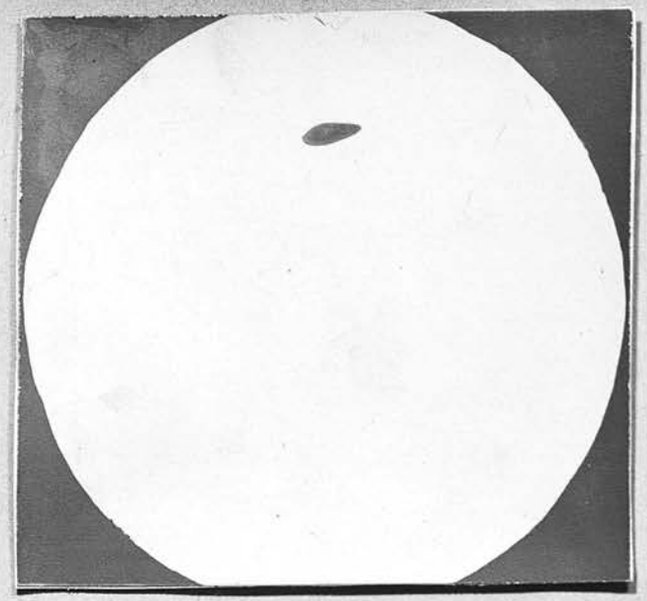
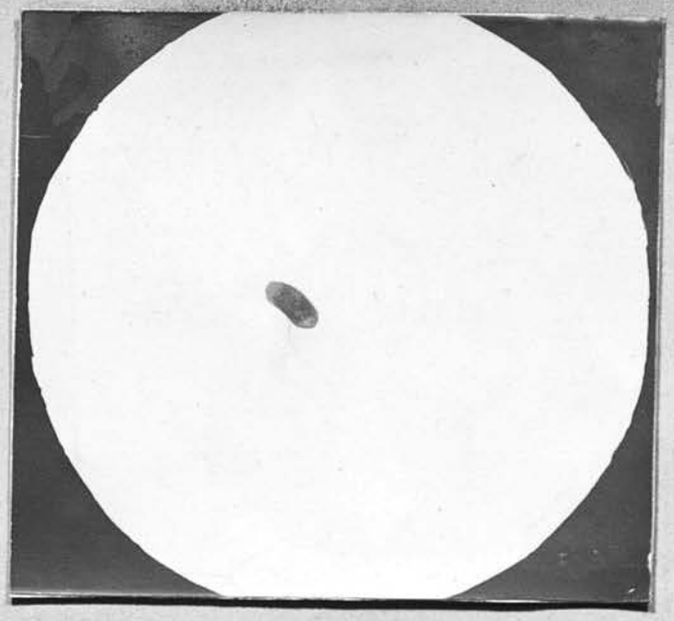


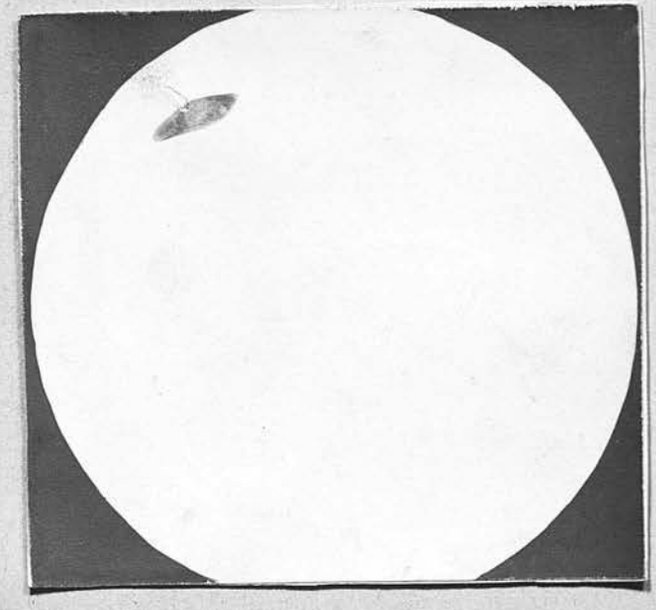
Fig. 5

Fig. 1. Amoeba princeps.
Fig. 2. The same, shewing contractile vacuoles.
Fig. 3. Spirostomum teres.
Fig. 4 Lacrymaria after in contracted stage previous to encystment.
Fig. 5. Lacrymaria after at rest (much as in 4)

X







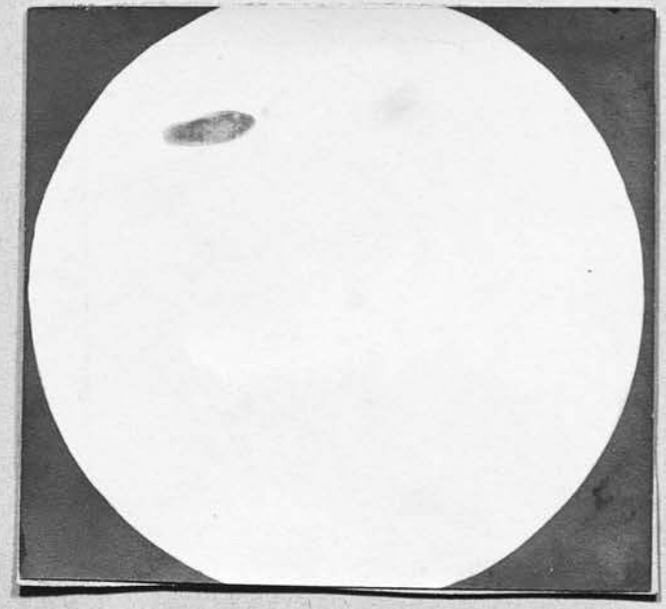


Fig 1. Paramecium aurelia (X.80). cf. with Fig 3

Fig 2. Oxyfed Stylonichia pustulata (see text.) It is black with excretory granules.

Fig. 3 } Paramecium caudatum. Full grown products of one binary fission. The aspects
Fig. 4. } happen to be ventral & dorsal respectively but the unlikeness especially at the extremities is apparent. (X 80.) cf. with Fig 1.

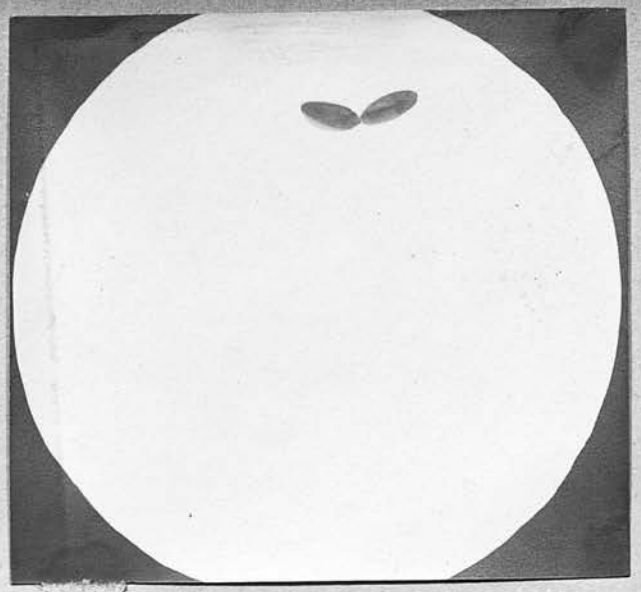


Fig. 1

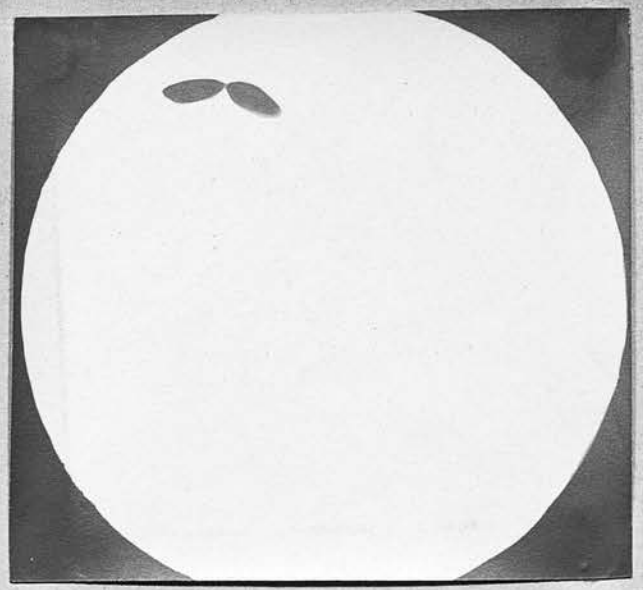


Fig. 2

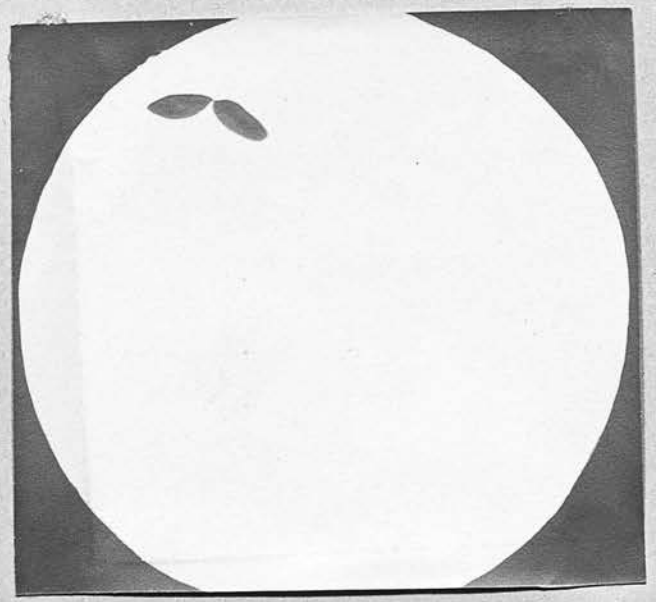


Fig. 3.

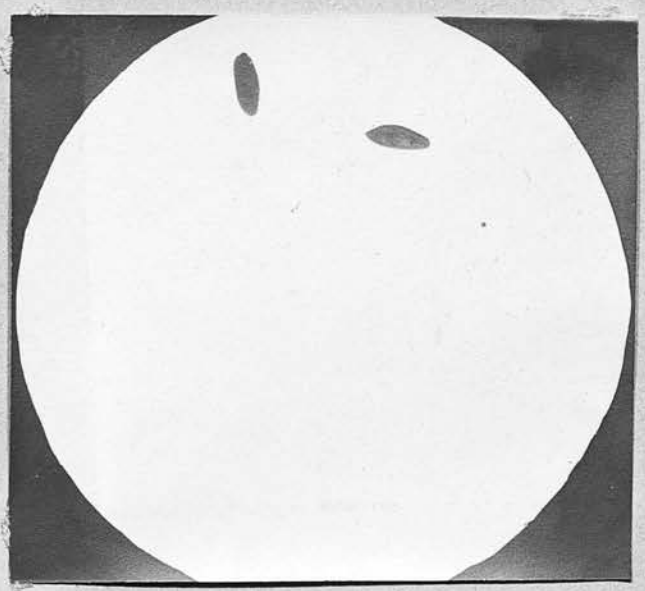


Fig. 4.

These four figures represent the last stages in the fission of Paramecium caudatum. There is a time interval of 1/4 hour between Figs. 3 & 4. The dissimilarity is hardly more marked than in the adult forms. (×20).

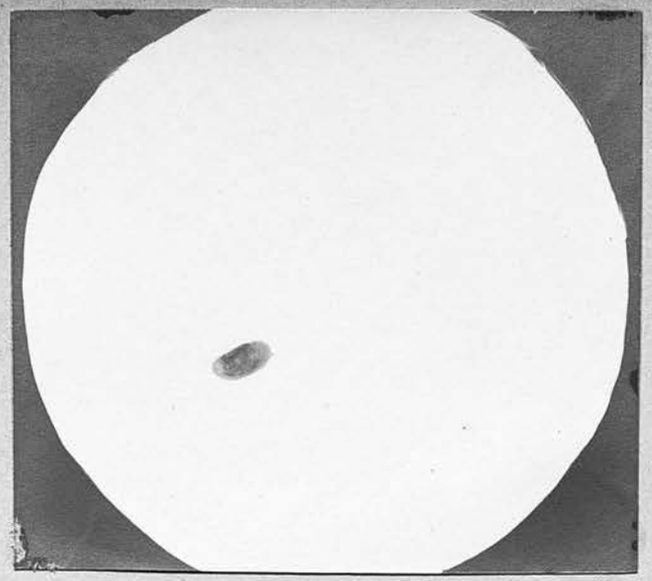


Fig 1.

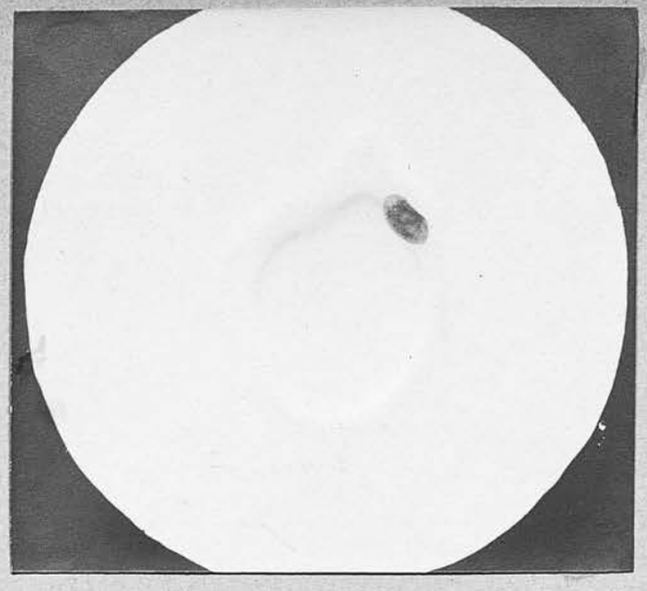


Fig 2.

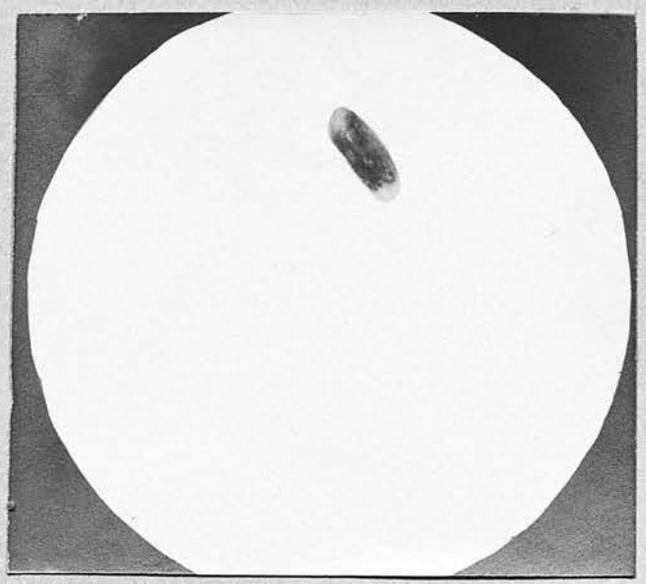


Fig 3.

Fig 4.

Fig 1. } Stylonichia pustulata. Products of a binary fission (×80). Note dissimilarity.
Fig 2. }

Fig 3. } Stylonichia pustulata. Products of a binary fission (×80). Note dissimilarity.
Fig 4. }

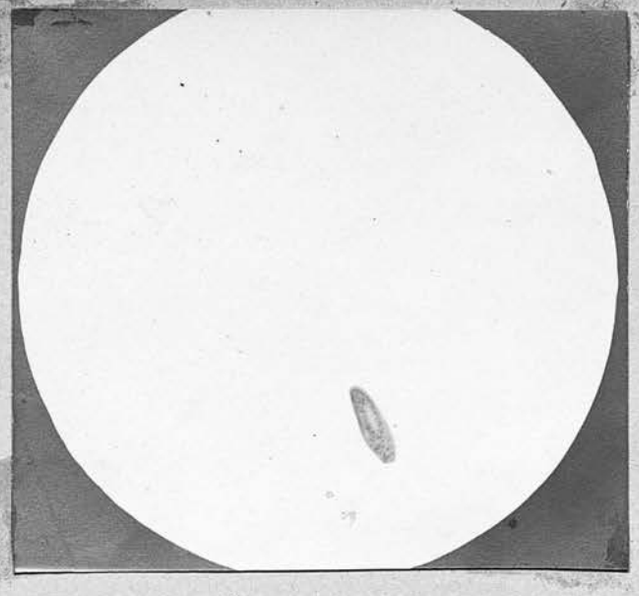


Fig. 1

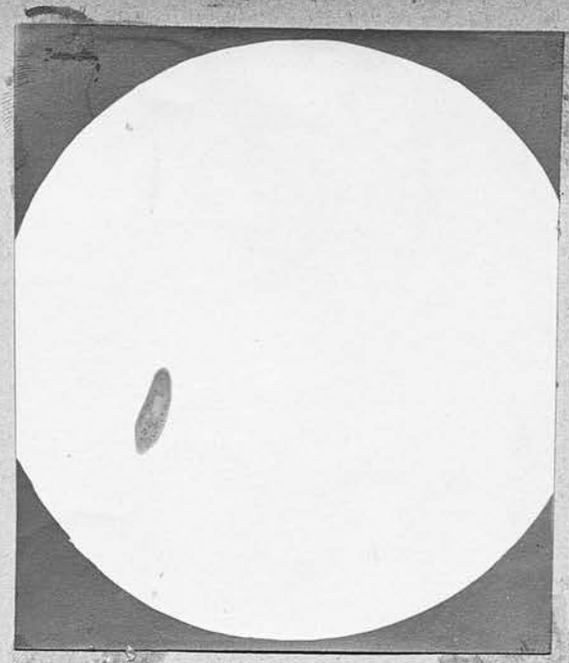


Fig. 2

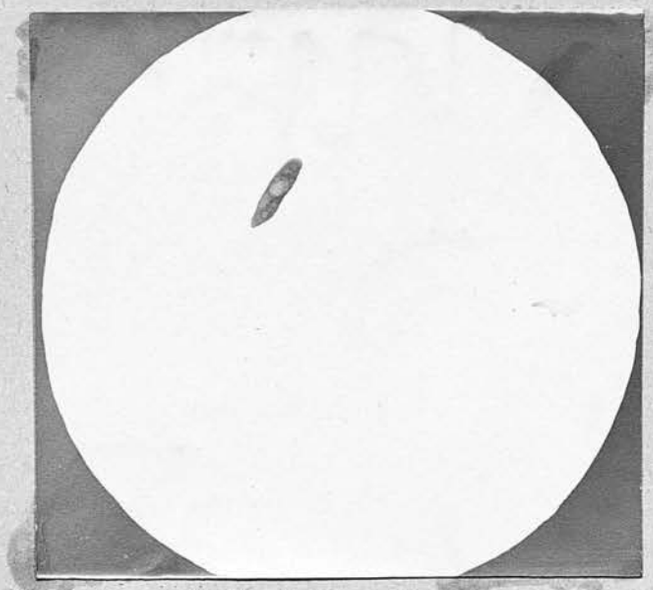


Fig. 3

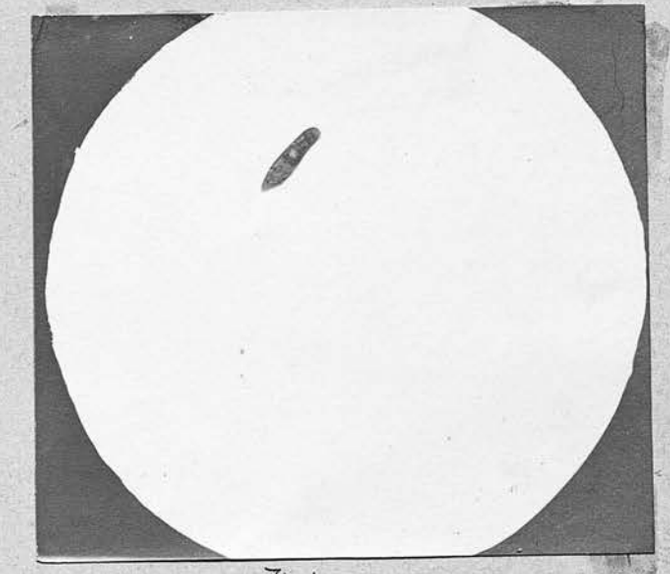


Fig. 4

Fig. 1.
Fig. 2. } Products of a binary fission – Paramecium caudatum. Note dissimilarity.

Fig. 3.
Fig. 4. } Products of a binary fission – Paramecium caudatum. Note dissimilarity.

Fig. 1.

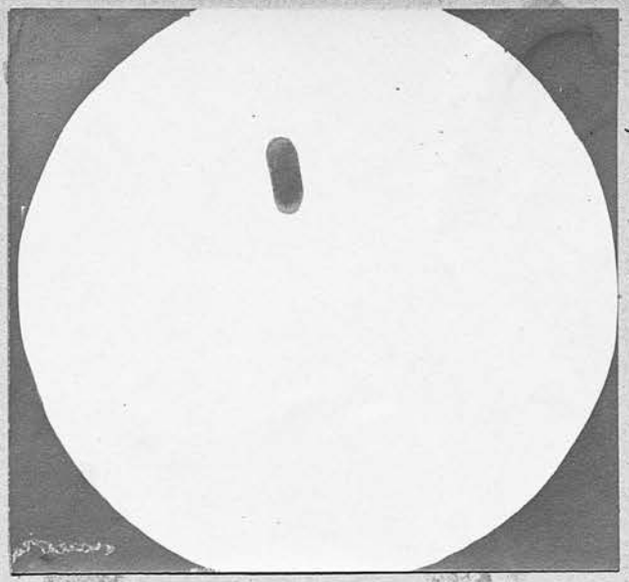


Fig. 2.

Fig. 1.
Fig. 2. } Stylonichia pustulata : products of a binary fission. Note dissimilarity.