

Key to Labelling

| | |
|--|--------------------------------|
| c: cornea | ro: rostrad |
| ca: camera anterior | sc: scleral cartilage |
| ch: choroid | scc: scleral cornea |
| chc: choriocapillaris | sf: fibrous part of sclera |
| f: bundle of filaments in process of retinal pigment epithelium | v: vitreous |
| i: iris | zc: zona ciliaris |
| l: lens | 1: retinal pigment epithelium |
| lc: lens capsule | 2: layer of rod acromeres |
| lm: lens muscle | 3: external limiting membrane |
| lr: ? rudimentary lens | 4: outer nuclear layer |
| m: macrophage | 5: outer plexiform layer |
| mb: myeloid body | 6: inner nuclear layer |
| pcr: pars coeca retinae | 7: inner plexiform layer |
| pi: retinal pigment epithelium | 8: ganglion cell layer |
| r: retina | 10: internal limiting membrane |

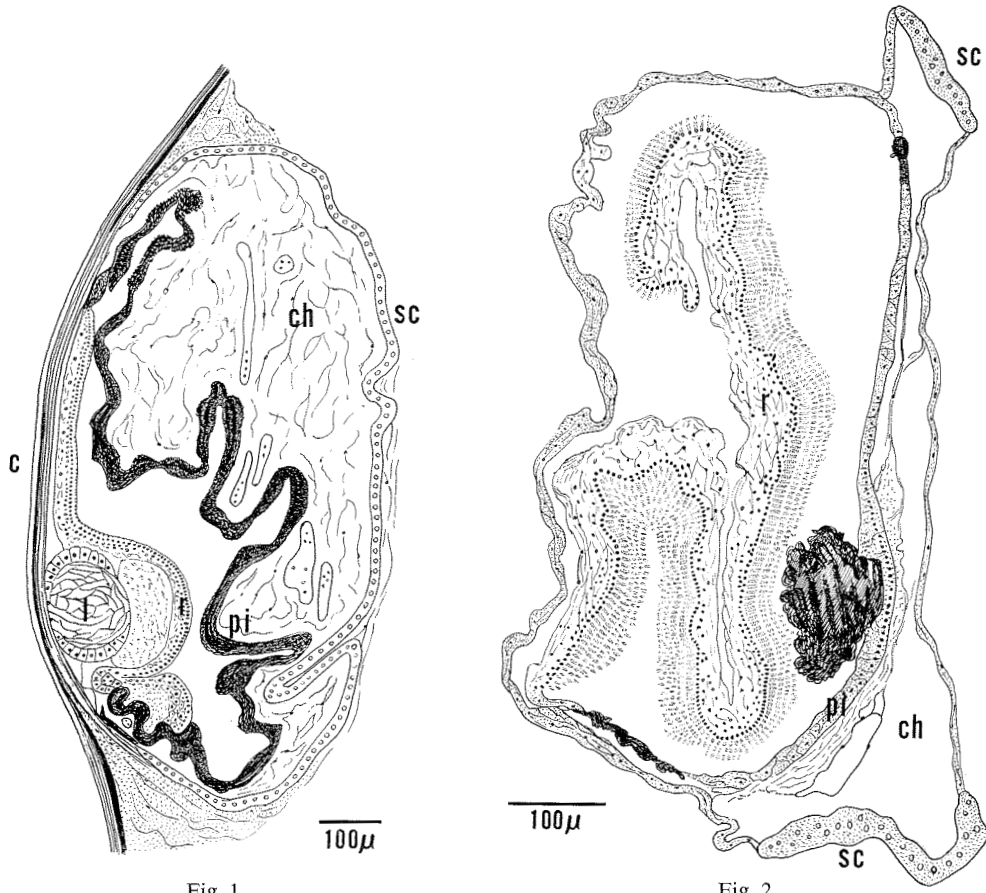


Fig. 1

Fig. 2

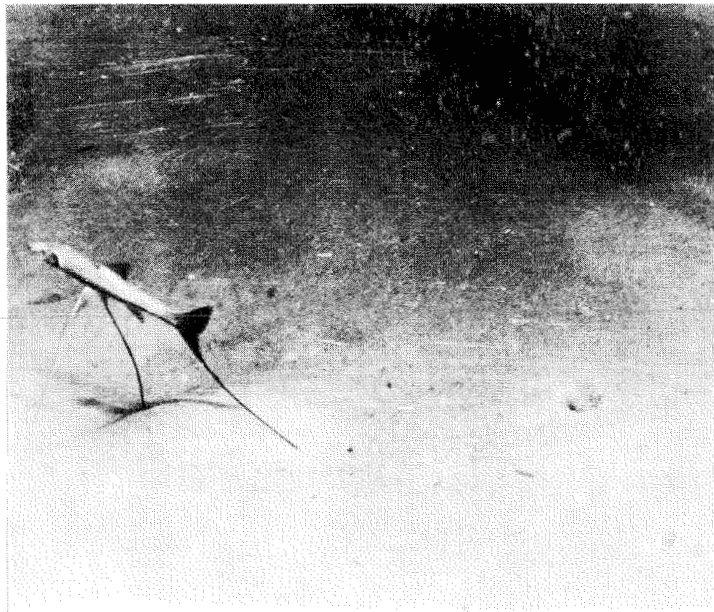
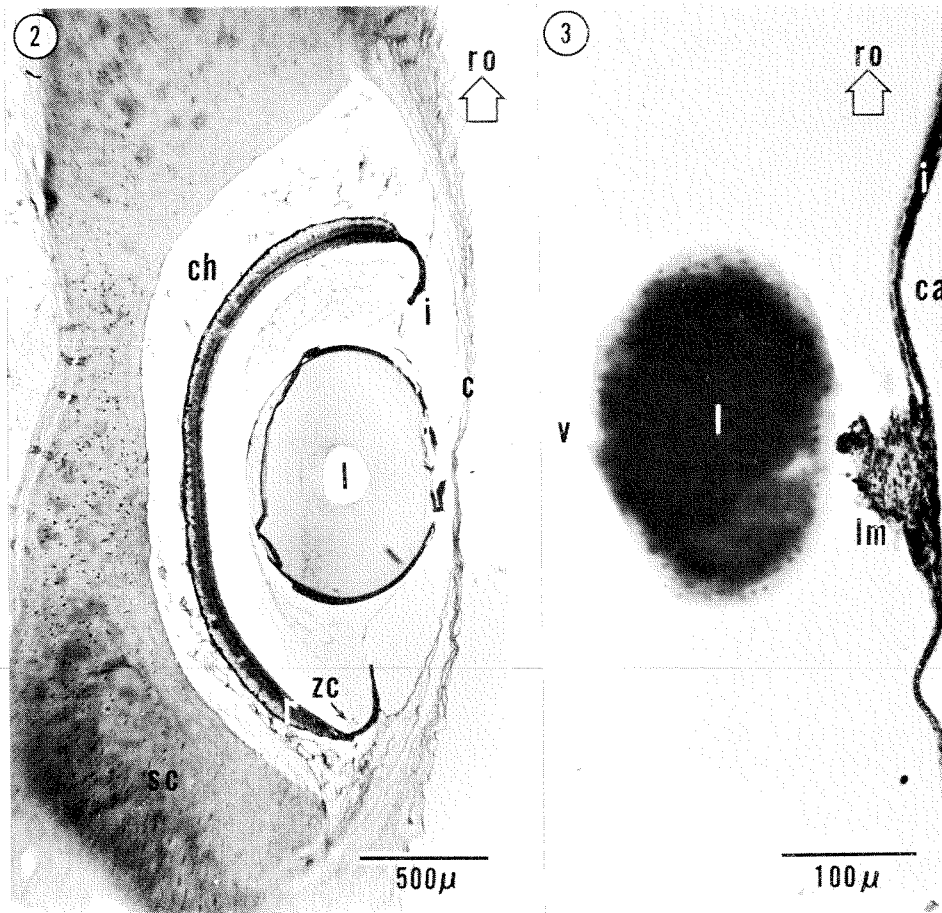
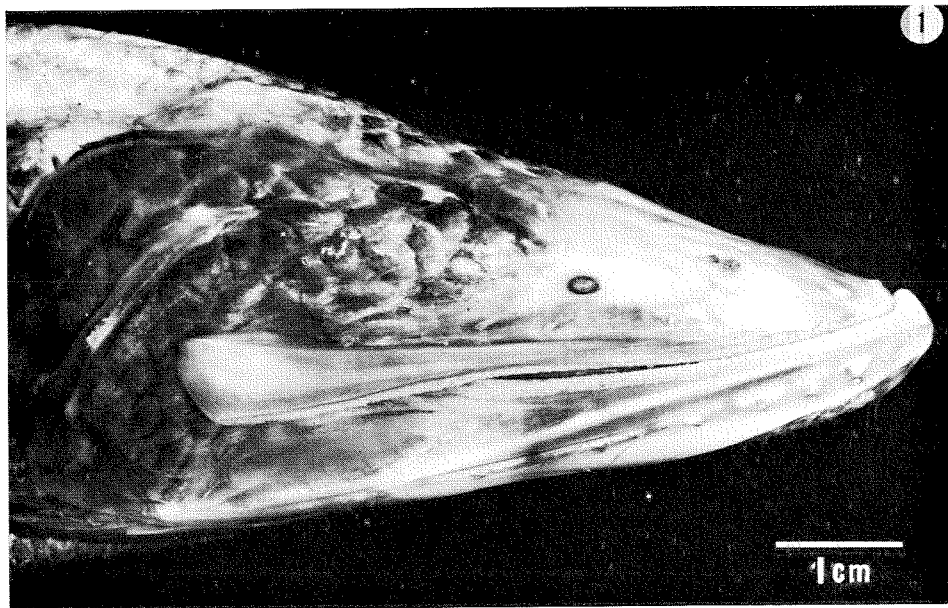


Fig. 3

- Fig. 1: Eye of *Cetomimus* sp. Re-drawn from BRAUER (1908).
Fig. 2: Eye of *Barathronus affinis*. Re-drawn from BRAUER (1908).
Fig. 3: *Benthosaurus* sp. standing on bottom supported by elongated fin rays.
Photographed by Captain G. HOUOT.

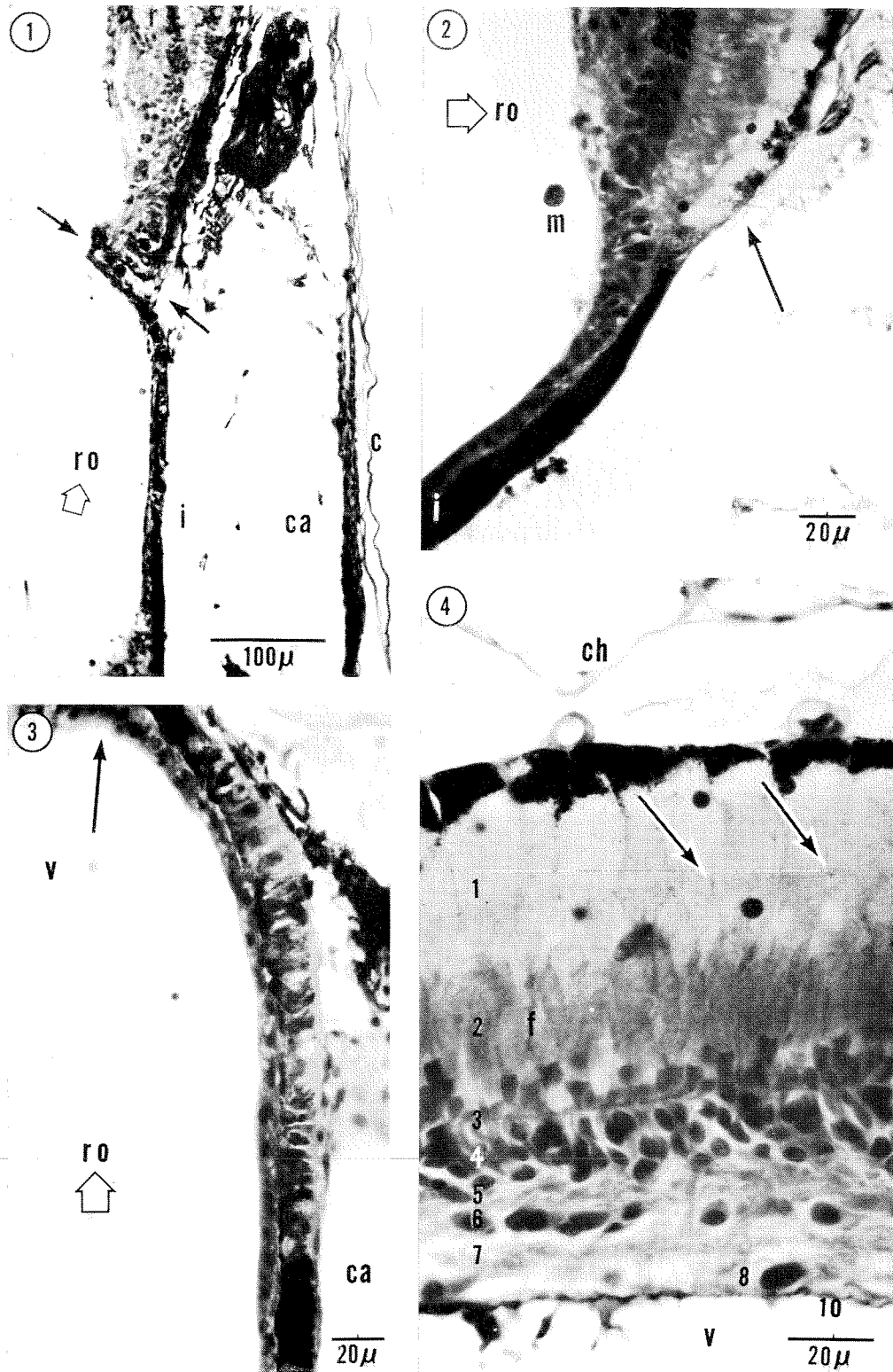


Benthosaurus grallator

Fig. 1: Lateral view of head of *Galathea*-specimen. Reduced from $2.2\times$

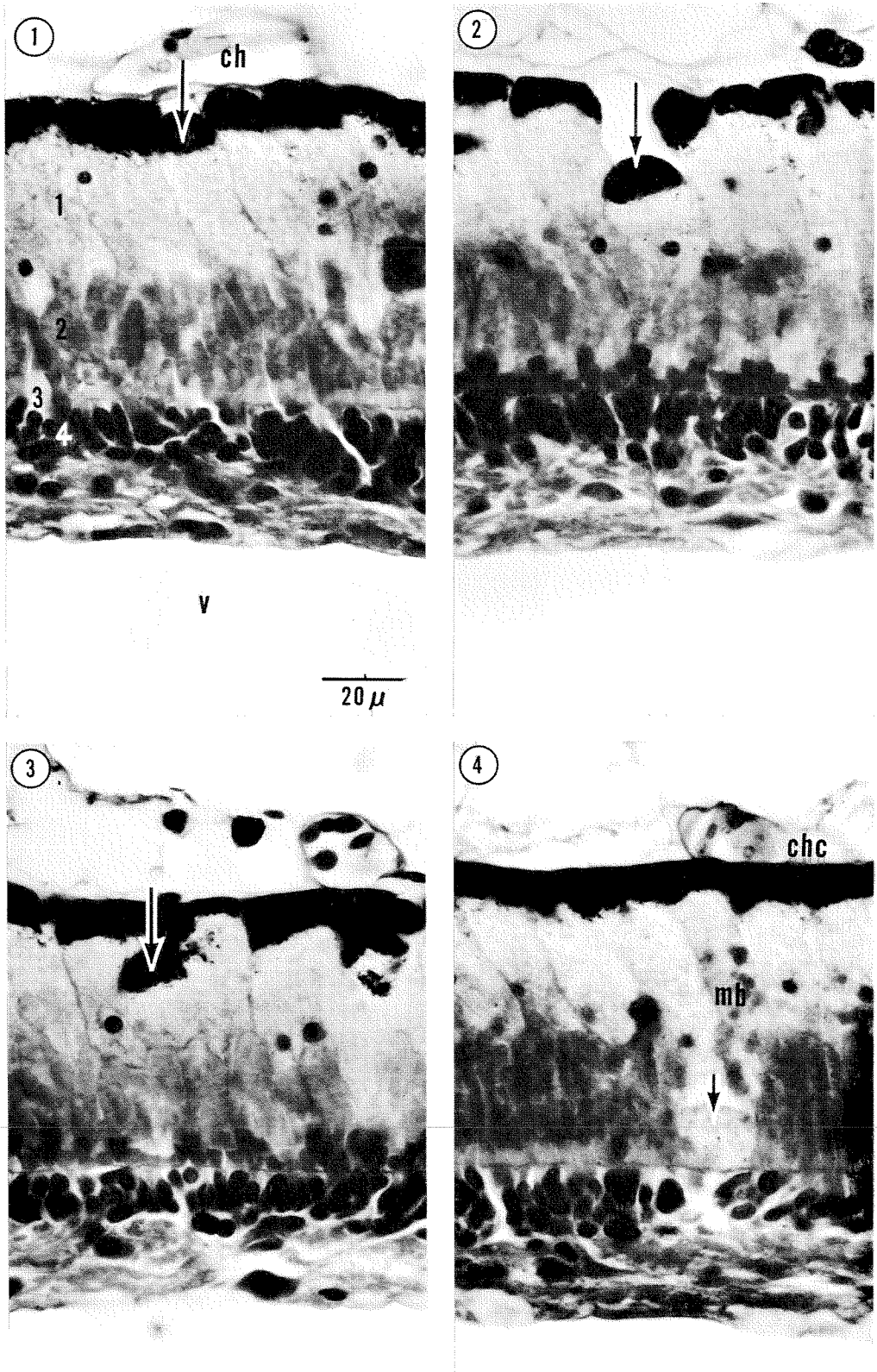
Fig. 2: Horizontal section of right eyeball through horizontal meridian. PAS. NA: 0.10. Reduced from $45\times$

Fig. 3: Section through lowermost part of lens with lens muscle situated on inside of iris. Tetrachrome. NA: 0.45. Reduced from $230\times$



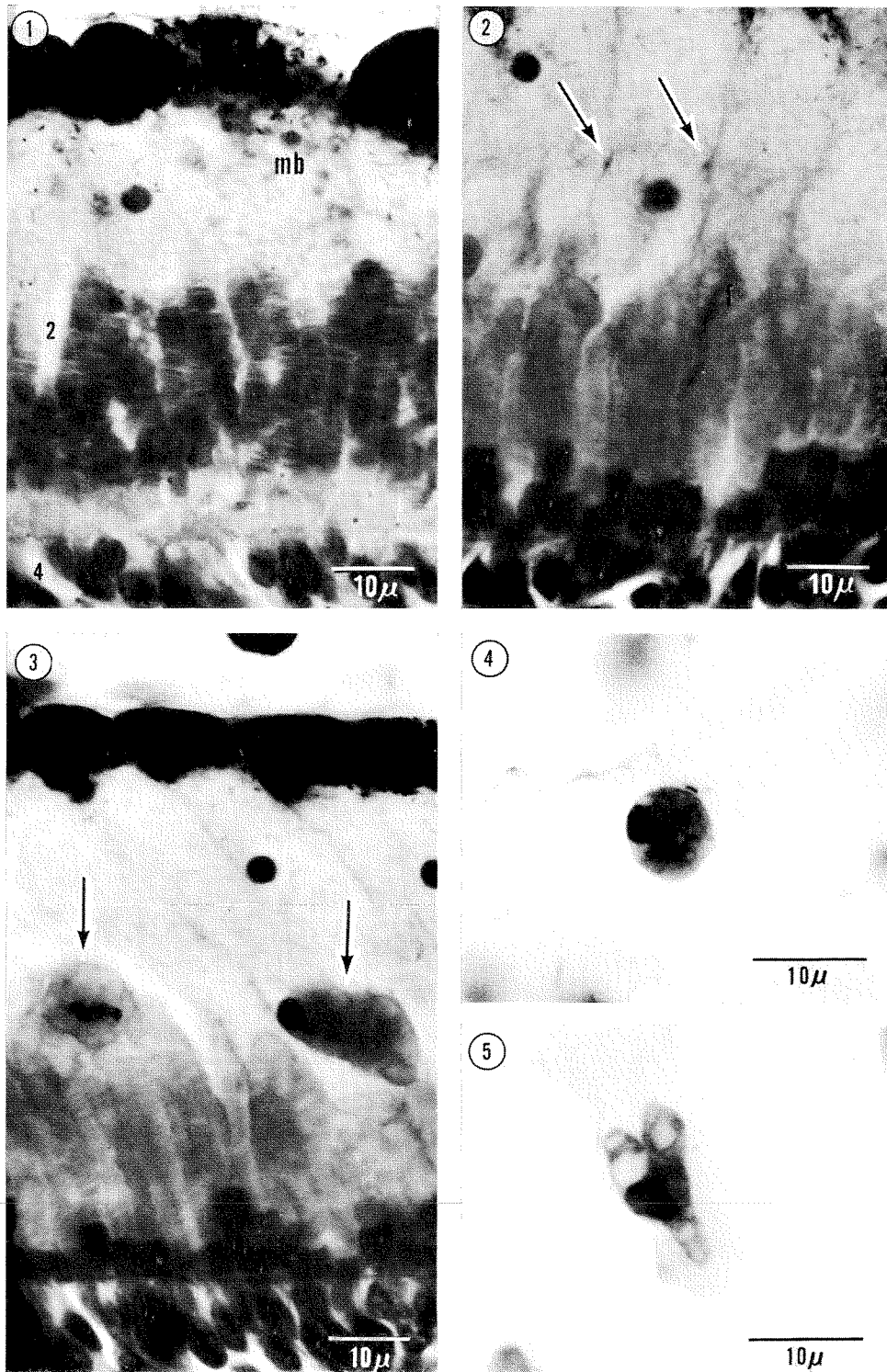
Benthosaurus grallator

- Fig. 1: Horizontal section through lowermost part of iris with choroid fissure (between arrows). PAS. NA: 0.45. Reduced from 230 \times
- Fig. 2: Ora terminalis at rostral part of eye. Arrow shows faintly pigmented zone of retinal pigment epithelium. PAS. NA: 0.65. Reduced from 540 \times
- Fig. 3: Pars coeca retinae from rostral part of eye. Arrow points at ora terminalis retinae. H-E. NA: 0.65. Reduced from 540 \times
- Fig. 4: Retina from rostral part of eye. Arrows point at terminal bars. H-E. NA: 1.0. Reduced from 880 \times



Benthosaurus grillator

Figs. 1-4: Retina in central part of fundus showing pigment epithelium cells detached from BRUCH'S membrane (arrows). The cell in Fig. 4 is attached to the external limiting membrane. In Fig. 4 PAS-positive needles and granules can be seen in the cytoplasm of the erythrocytes in choriocapillaris, and myeloid bodies are present in the pigment epithelium. Figs. 1-3: H-E, Fig. 4: PAS. NA: 1.0. Reduced from 880×



Benthosaurus grillator

Fig. 1: Retina. Myeloid bodies in pigment epithelium and swollen rod acromeres. PAS. NA: 1.30. Reduced from 1745×

Fig. 2: Retina. Bundle of fine filaments is seen in process from pigment epithelium. Arrows point at terminal bars. H-E. NA: 1.30. Reduced from 1745×

Fig. 3: Retina. Arrows point at cells which are probably phagocytic. In the cell to the right fragments of rod acromeres are seen in the cytoplasm. H-E. NA: 1.30. Reduced from 1745×

Figs. 4-5: Macrophages from choroid. H-E. NA: 1.30. Reduced from 2540×

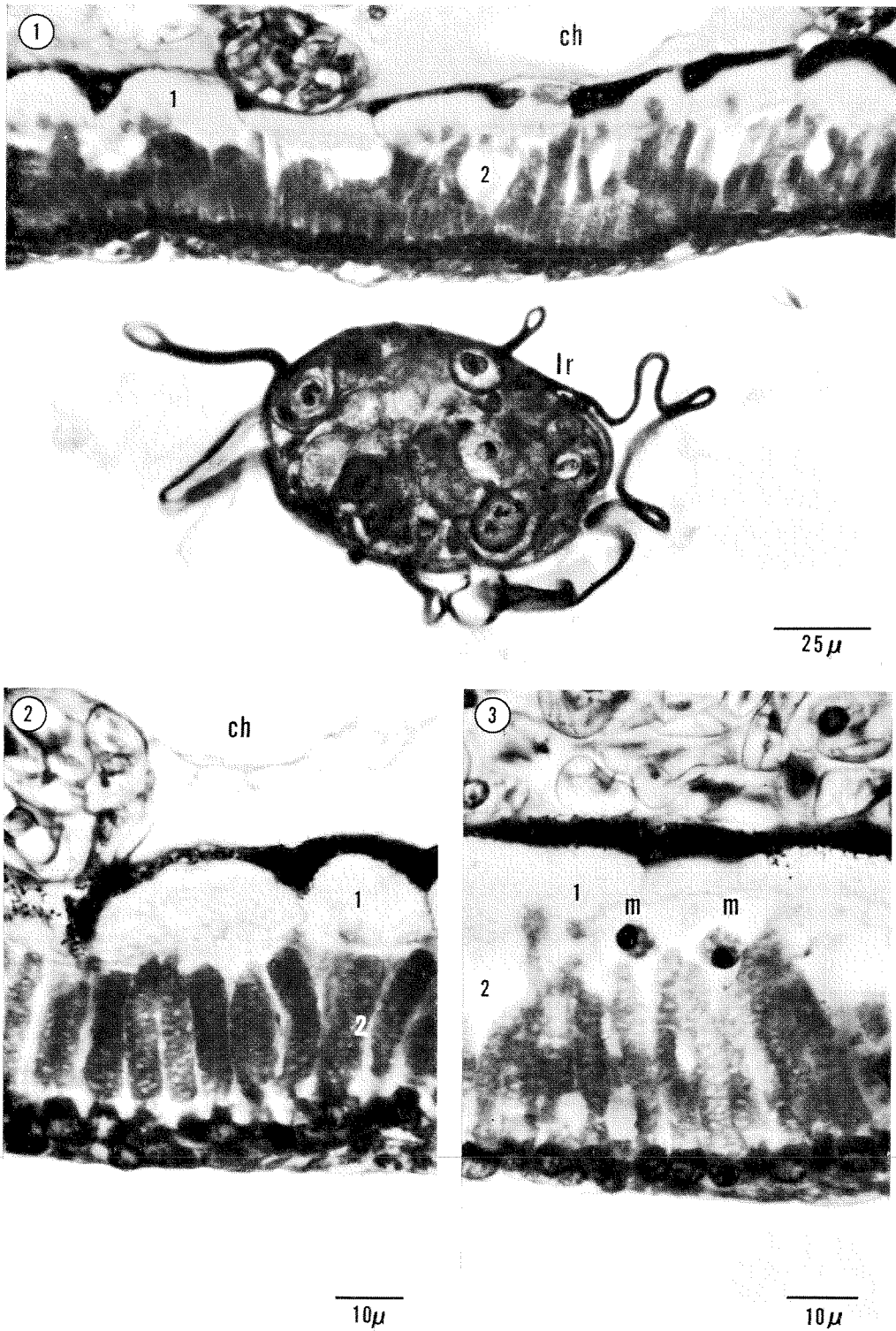
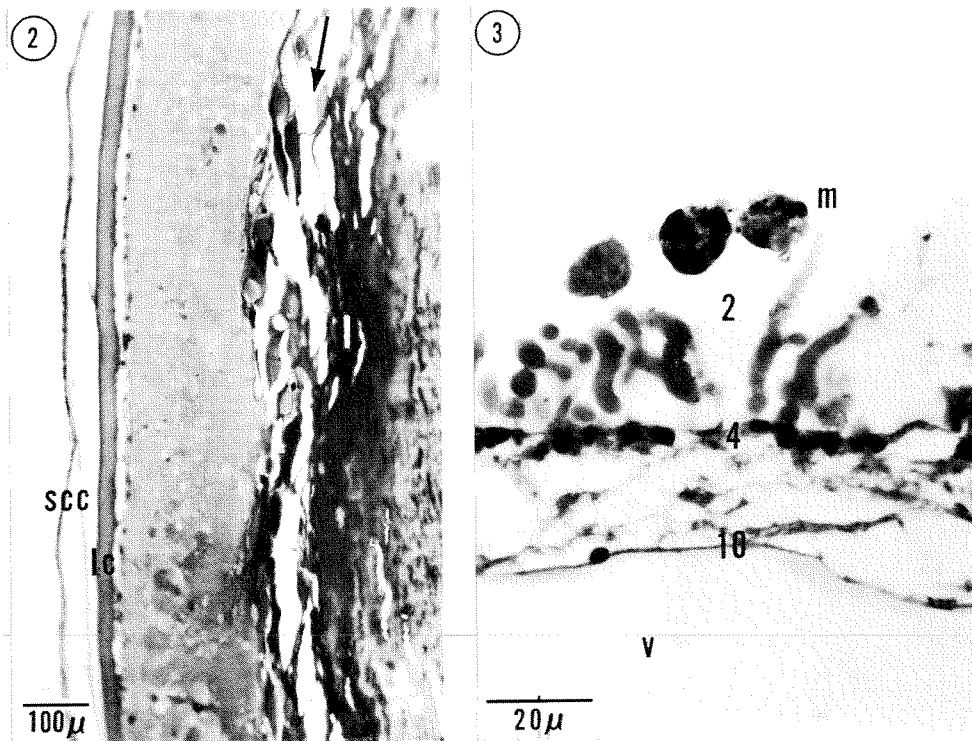
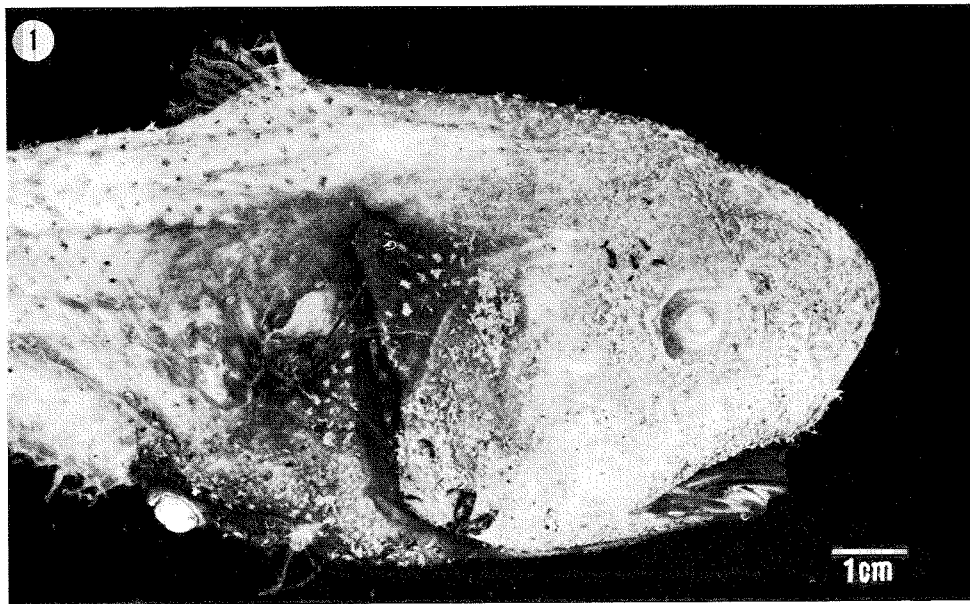
*Ipnots murrayi*

Fig. 1: Structure thought to be rudimentary lens situated close to retina in central part of eye. H-E. NA: 0.65. Reduced from 840 \times

Fig. 2: Retina with swollen acromeres. H-E. NA: 1.30. Reduced from 1535 \times

Fig. 3: Retina with swollen acromeres and macrophages. H-E. NA: 1.30. Reduced from 1535 \times



Macrouroides inflaticeps

Fig. 1: Lateral view of head of *Galathea*-specimen. Reduced from $1.25\times$

Fig. 2: Anterior pole of lens with cortical cataract. Arrow points at artificial fissure.
H-E. NA: 0.45. Reduced from $215\times$

Fig. 3: Peripheral retina near ora with macrophages in layer of rod acromeres. PAS.
NA: 1.0. Reduced from $940\times$

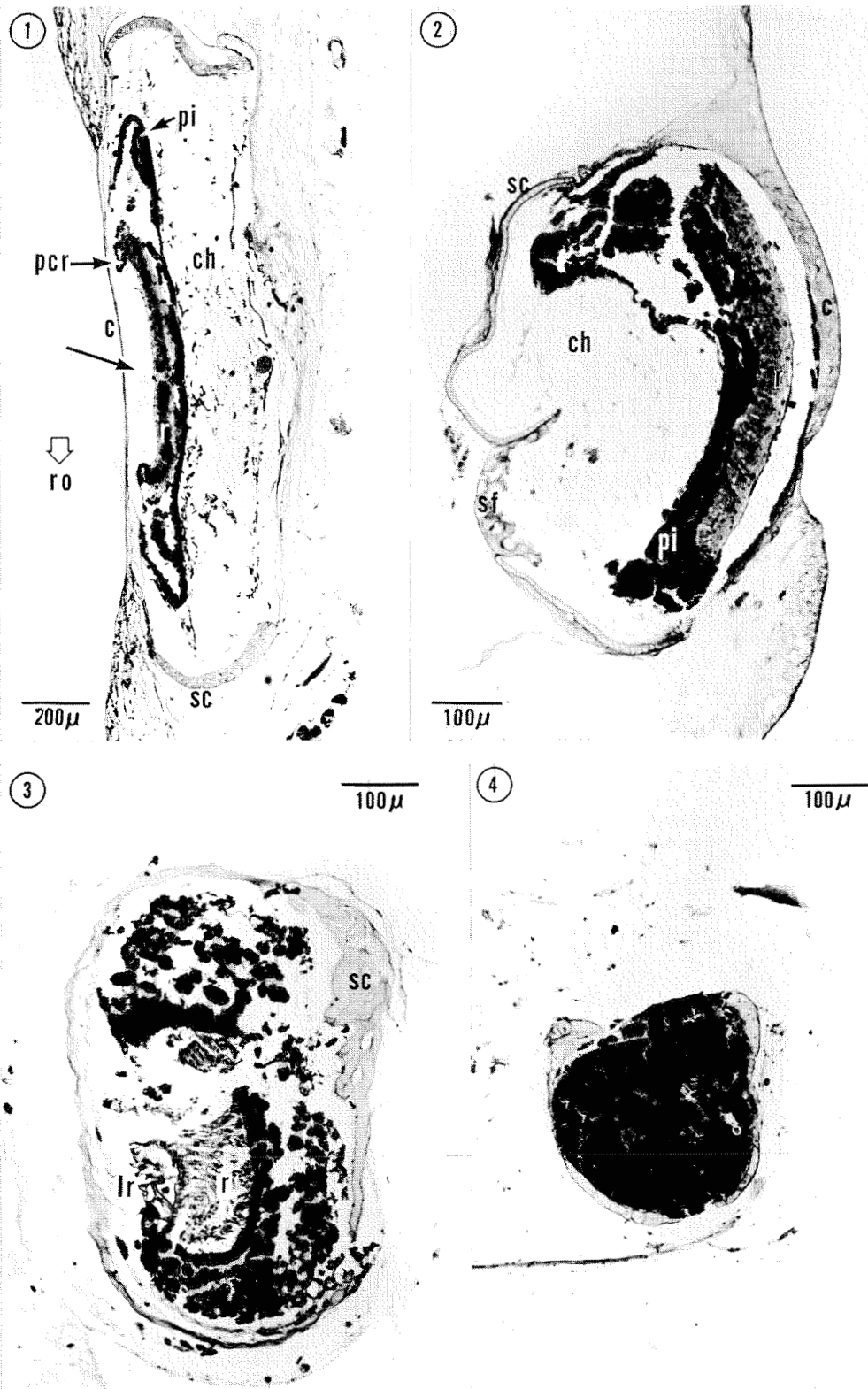


Fig. 1: *Ditropichthys storeri*. Horizontal section of right eye slightly below optic papilla.

Arrow points at choroid fissure. Tetrachrome. NA: 0.16. Reduced from 78×

Fig. 2: *Gyronomimus* sp. Vertical section of left eye. Tetrachrome. NA: 0.20. Reduced from 155×

Fig. 3: *Bathymicrops regis*. Left eye. AB-PAS. NA: 0.45. Reduced from 170×

Fig. 4: *Sciadonus kullenbergi*. Right eye. PAS. NA: 0.45. Reduced from 170×

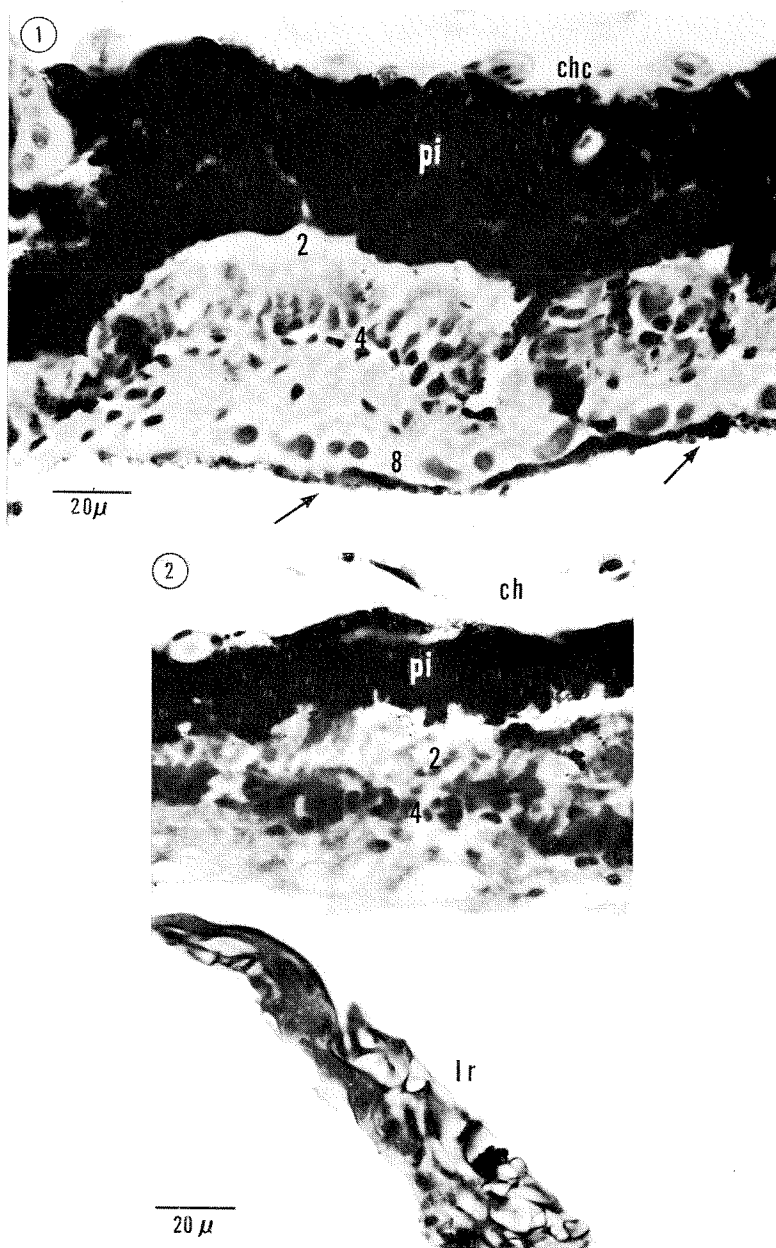


Fig. 1: *Gyronomimus* sp. Retina. Arrows point at free retinal pigment granules located on inside of retina. H-E. NA: 1.0. Reduced from 890 \times

Fig. 2: *Ditropichthys storeri*. Retina. Structure situated close to inside of retina is possibly a rudimentary lens. PAS. NA: 1.0. Reduced from 940 \times