

Heidenhain's hæmatoxylin were found to give excellent pictures. No particular treatment was found necessary to remove the metachromatic granules from the cells. In smears fixed for 60 minutes in Carnoy's fluid, mordanted overnight in iron-alum and kept in hæmatoxylin for 24 to 36 hours, careful differentiation gives only pictures of the chromosome stages. We have smears where large number of cells are at particular phases of the mitotic cycle.

There are only two chromosomes, both identical in appearance (Fig. 1). The measurements of the two chromosomes in four cells at the same stage of the cycle are as follows:—

(1) $1.33 \mu/0.33 \mu$, $1.33 \mu/0.4 \mu$; (2) $1.33 \mu/0.4 \mu$, $1.33 \mu/0.27 \mu$; (3) $1.33 \mu/0.33 \mu$, $1.00 \mu/0.33 \mu$; (4) $1.00 \mu/0.33 \mu$, $1.00 \mu/0.33 \mu$. At anaphase shown in Fig. 2 they measure $1.00 \mu/0.33 \mu$.

Badian's paper has evoked contradictory opinions. While Gulliermond rejects Badian's interpretations, Henrici considers that "the two chromosomes described by him are more definite than the vague accumulations of minute chromatin granules described by Guillermond". It appears as if Badian saw structures missed by the other workers. *S. cerevisiæ* does not form an exception to the general rule, for, nuclear division during budding is by mitosis.

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ON THE FOOD OF MULLET*

MULLETS are a group of food-fishes found in seas, backwaters and estuaries of our country.

The food of twelve species of Mulletts is described by examining their stomach-contents.

- (1) *Mugil klunzingeri* Day. (30 specimens, 8-13 cms.): *Amphora*, *Cymbella*, *Pleurosigma*, *Eremosphaera*, *Copepods* and sand grains.
- (2) *Mugil jerdoni* Day. (15 specimens, 8-10 cms.): *Biddulphia*, *Coscinodiscus*, *Cymbella*,

Fragillaria, *Pleurosigma*, *Rhizosolenia*, *Eremosphaera*, *Peridinians*, larval bivalves, larval gastropods, fish-eggs, fish scales and sand grains. (3) *Mugil dussumieri* Cuv. & Val. (25 specimens, 8-10 cms.): *Coscinodiscus*, *Cymbella*, *Fragillaria*, *Gomphonema*, *Navicula*, *Nitzschia*, *Pinnularia*, *Pleurosigma* and sand grains. (4) *Mugil œur* Forskal (12 specimens, 9-10 cms.): *Biddulphia*, *Coscinodiscus*, *Navicula*, *Nitzschia* and sand grains. (5) *Mugil sehali* Forskal. (61 specimens, 9-21 cms.): Algal filaments, *Bacteriastrum*, *Biddulphia*, *Coscinodiscus*, *Fragillaria*, *Nitzschia*, *Pleurosigma*, *Rhizosolenia*, *Thalassiothrix*, *Trichodesmium*, larval polychætes and sand grains. (6) *Mugil crenilabris* Forskal. (20 specimens, 10-15 cms.): *Coscinodiscus*, *Navicula*, *Pinnularia*, *Pleurosigma*, *Tabellaria*, larval polychætes and sand grains. (7) *Mugil œeruleo-maculatus* Lacep. (30 specimens, 9-12 cms.): *Biddulphia*, *Chætoceras*, *Coscinodiscus*, *Navicula*, *Pinnularia*, *Pleurosigma*, larval polychætes, *Tabellaria* and sand grains. (8) *Mugil amarulus* Cuv. & Val. (5 specimens, 5-8 cms.): *Coscinodiscus*, *Eremosphaera* and sand grains. (9) *Mugil labiosus* Cuv. & Val. (5 specimens, 5-8 cms.): Algal filaments, *Coscinodiscus* and sand grains. (10) *Mugil olivaceus* Day. (20 specimens, 7-9 cms.): *Bacillaria*, *Coscinodiscus*, *Fragillaria*, *Navicula*, *Pleurosigma* and sand grains. (11) *Mugil troschelii* Bleeker (123 specimens, 10-35 cms.): Algal filaments, sea-weed (*Caulerpa* sp.), *Chætoceras*, *Chroococcus*, *Cœlosphaerium*, *Coscinodiscus*, *Eremosphaera*, *Gleocapsa*, *Hemidiscus*, *Navicula*, *Nitzschia*, *Pleurosigma*, *Rhizosolenia*, *Tabellaria*, *Thalassiothrix*, *Foraminifers*, *Tintinnus*, larval polychætes, *Nauplius* larvæ, *Ostracods* and sand grains. (12) *Mugil waigiensis* Quoy. and Gaim. (126 specimens, 10-45 cms.): Algal filaments, *Bacteriastrum*, *Biddulphia*, *Coscinodiscus*, *Detonula*, *Eremosphaera*, *Fragillaria*, *Gœlenkinia*, *Hemidiscus*, *Navicula*, *Nitzschia*, *Pleurosigma*, *Rhizosolenia*, *Tabellaria*, *Thalassiothrix*, *Trichodesmium*, *Dinophysis*, *Foraminifers*, *Tintinus*, larval polychætes, *Copepods*, *Amphipods*, *Ostracods*, larval gastropods and sand grains.

Discussion.—Mulletts are chiefly plankton-feeders, diatoms and larval bristle-worms forming the major portion of their food. They, however, supplement their diet by browsing at the water margin on vegetable matter, and this accounts for the presence of sand grains in their stomachs. The presence of fish-eggs in a few specimens of *Mugil jerdoni* Day. is considered accidental.

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