that a fat-body freely suspended from the dorsal aspect of the abdominal cavity could have induced atrophy by pressure in a structure such as the linea alba. Sudden mechanical pressure, such as a blow, a preformed embryonic pathway, failure of body-wall structure through postural gravity effects, interference with the vascular supply and other recognized causes of rupture likewise provided no satisfactory explanation for this case. Accordingly, it was suggested by way of hypothesis[2] that at the surface of a rapidly growing fat-body there are the mechanism of hyperplasia and hypertrophy and also a histolytic mechanism. The latter process, if induced by a substance transferable from the tip of the fat-body to the peritoneum and tissues of the linea alba, would provide a probable explanation for the establishment of the initial pathway for the hernia.

A further example in which the posterior lobe of the left ovary of a gravid adult frog extended into the left paravesical space, and, without adhesions, passed through the walls of the bladder to enter the right paravesical space and then the right femoral lymph-space where it expanded to normal size, gives further support to the above suggestion, especially since the foramen in the bladder is only 3·0 mm. in diameter, thus indicating that the bladder was perforated originally by the tip of the lobe of the ovary. The two walls of the bladder are fused around the margin of the perforation, and the lumen of the bladder closed off from the coelom. The posterior lobe of the right ovary had also ruptured into the femoral lymph-space, probably following the path established by the lobe of the left ovary.

The existence in the tadpole of histolytic processes is recognized in the tissue reductions and modifications during metamorphosis, and in the seasonal reduction of the reproductive organs following breeding. The results above indicate that a histolytic process is present during the growth and elaboration of the reproductive organs prior to breeding. It may be suggested that this process is responsible during that time for the breakdown of tissues which might otherwise cause mechanical difficulties during hyperplasia and hypertrophy of the adipose tissue in the fat-body and of the germinal tissue in the ovary. It may also assist in ovulation.

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A Monogenetic Trematode New to the British Fauna

In the course of a survey of the parasite fauna of gadoid fishes in the northern North Sea, I have examined 28 cod (*Gadus callarias* L.) from various localities along the east coast of Scotland in the second half of 1958. The fish were all less than one year old and ranged in size from 12·4 to 18·6 cm. Three of these fish were infested by a species of *Gyrodactylus* (Trematoda: Monogenea), not hitherto recorded from British waters. The parasites were attached to the gills (rakers, bars and filaments) and within the buccal cavity of their hosts. One cod was found to harbour five specimens of *Gyrodactylus* in its nostrils—a somewhat unusual habitat for this trematode genus. The numbers of parasites varied from host to host, the lowest being 6 and the highest 197 specimens. All three infested fish were caught relatively near the shore: one was taken in the Firth of Forth, 5 miles east of May Island, and two about 15 miles south-east of Stonehaven, at a depth between 55 and 68 m.

The parasites were identified by Dr. Göran Malmberg of Zootomiska Institutet, Stockholm, as *Gyrodactylus callariatis*[1]. The species was described by Dr. Malmberg from cod taken in Nämdö, near Stockholm. The dimensions of the fresh specimens are as follow:

Total length	0·42–0·70 mm.
Body width	0·09–0·18 mm.
Opisthaptor length	0·08–0·12 mm.
Opisthaptor width	0·11–0·15 mm.

The anchoring apparatus of the species is distinguished by a dorsal bar with a central process pointing posteriorly. Its ventral bar is large and provided with wide antero-lateral processes. The membrane of the ventral bar is grooved and wide at the base. The marginal hooks are long and slender.

G. callariatis differs significantly from *G. marinus*, another species of the genus found on cod in the Barents Sea and the northern Pacific[2].

The genus *Gyrodactylus* contains relatively few marine species. They infest mainly young fish in coastal areas. Like some other monogenetic trematodes, *G. callariatis* appears to be a 'childhood' parasite[3], which might be the reason why it has not so far been discovered in British waters. Young stages of fish are only infrequently used for parasitological examinations.

I have also found another species of *Gyrodactylus* on whiting, *Gadus merlangus* L., in the same area. The specimens of this parasite are at present in Dr. Malmberg's hands.

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A Diagnostic Reaction of *Desulphovibrio desulphuricans*

The sulphate-reducing bacteria at present available in pure culture are *Desulphovibrio desulphuricans*, its *aestuarii* variant[1], the thermophilic *Clostridium nigrificans* (earlier known as *D. thermodesulphuricans*[2]) and the new species *D. orientis*[3]. The species *D. rubentschickii* and its variant *anomalous*, able to utilize acetate and/or butyrate[4], have so far defied re-isolation.

Cl. nigrificans is readily distinguished from the other species by its thermophilic habit. *D. orientis* shows broad differences in appearance and motility from the *desulphuricans* pair, but is mainly distinguished by its multiple flagellation and ability occasionally to form spores, and neither of these features is technically very satisfactory for rapid diagnosis. A third distinguishing test has been devised making use of the absence of desulphoviridin[5] from *D. orientis*. The pigment desulphoviridin dissociates in alkaline solution to yield a photo-