RUPTURE OF THE ABDOMINAL WALL AS A CAUSE OF HIGH MORTALITY IN YOUNG AFRICAN CATFISH
(Clarias gariepinus, Burchell 1822)
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In the Netherlands, culture of Clarias gariepinus (Burchell, 1822) in recirculation systems is complicated by a disease in fry/fingerlings of 4-10 weeks old which cannot be explained by management errors. The affected fish show a distended belly, often associated with ruptures. This disease is known by the Dutch fish culturists as the “Open Belly Disease” (O.B.D.) and resembles the “Abdominal Dropsy” of cultured Clarias batrachus in Thailand (Anonymous, 1981) where a viral aetiology was suggested.

In this preliminary report the clinical signs and gross pathology of the O.B.D.' in fish used in feeding experiments in our department are described.

The first clinical symptoms were observed in 30-32 day-old fish (0.5-0.6 g). Affected fish hung in the water, mostly at the surface, the belly distended (fig. 1) and sometimes fish whirled around their longitudinal axis. Because of their predominantly passive behaviour they were taken by the waterflow to the tank outlet. These fish stopped eating. After dissection perforation of the intestines, usually at the end of the midgut and the beginning of the hindgut, was found. The lining of the abdominal wall was inflamed and a red-brown fluid was present in the abdominal cavity. In more advanced stages a local desquamation of the epidermis of the ventral side of the abdomen was observed. At the same time a degeneration of the muscles of the ventral part of the abdominal wall developed, resulting in an ulcer originating internally. This culminated in rupture of the ventral abdominal wall. Depending on the size of the rupture the stomach and intestine was exposed (fig. 2). Nearly all fish with clinical signs died, though in a minority, the defect of the abdominal wall was closed and a de novo anus opening was formed. These fish began eating and recovered.

Reviewing the symptoms and pathomorphological changes of the affected fish we suggest the following name for this disease: Ruptured Intestine Syndrome, unknown aetiology (R.I.S.u.ae.).

Analyses of the results of feeding experiments to clarify the aetiology of R.I.S. are in progress.

Summary
In young Clarias gariepinus, held under intensive conditions, a disease occurred characterized by a ruptured belly. Clinical signs and pathomorphological changes of this disease are given. The name Ruptured Intestine Syndrome, unknown aetiology (R.I.S.u.ae.) is suggested.

Reference
Fig. 1. Young African catfish (3 cm) with swollen discoloured abdomen and anus caused by a rupture of the gut.

Fig. 2. Young African catfish (3.2 cm). The ventral part of the abdominal wall and the gut has eroded. Only the anterior part of the digestive tract remains.