

REDESCRIPTION OF *GYRODACTYLUS* *LONGOACUMINATUS* ŽITŇAN, 1964 (GYRODACTYLIDAE: MONOGENEA)

R. ERGENS

Institute of Parasitology, Czechoslovak Academy of Sciences, Prague

Abstract. *Gyrodactylus longoacuminatus* Žitňan, 1964 is redescribed on the basis of studies of the type and comparative material. In addition to *Carassius carassius* also *C. auratus* is considered to serve as host of this species.

Žitňan (1964) described a new species of the genus *Gyrodactylus* Nordmann, 1832 — *G. longoacuminatus* collected from fins and skin of *Carassius carassius* (L.) caught from the river Hron (South Slovakia, Czechoslovakia). This description, however, does not correspond to the present demands of the taxonomy and systematics due to some criteria as inexact illustration of some hard parts of opisthaptor, particularly of marginal hook, and unsuitable species (*G. gobioninum* Gussev, 1955, *G. carassii* Malmberg, 1957 and *G. medius* Kathariner, 1893) used for the comparison of the species described.

In order to complement the available data on *G. longoacuminatus* I reexamined the type material and compared it with some of the specimens obtained later from *C. carassius* and *C. auratus* (L.) and originating from various localities of Eurasia. The results obtained are published in the present paper.

Only one of the five specimens (syntypes) used for the description of *G. longoacuminatus* has been preserved. It was mounted in glycerin jelly and designated as "typus". It is deposited in the Museum of the Helminthological Institute, Slovak Academy of Sciences in Košice (No. 2575/58). Other specimens examined were fixed in 4% formalin or in a mixture of ammonium picrate and glycerin, and embedded in glycerin jelly or in Canadian balsam. They are deposited in the collections of the Institute of Parasitology, Czechoslovak Academy of Sciences, Prague and of the Zoological Institute, USSR Academy of Sciences, Leningrad.

The observations were made with a phase-contrast microscope and illustrations were prepared with the aid of a camera lucida. The technique of Ergens and Lom (1970) was used for measuring the hard parts of opisthaptor. All measurements are in millimeters.

Unfortunately, the type of specimen was fixed poorly, the roots of both anchors were deformed and the shield of ventral bar and marginal hooks were almost invisible. In spite of this I managed to verify most of the measurements of the hard parts of opisthaptor of *G. longoacuminatus* published in the original description and to determine the exact shape of the hooks proper of marginal hooks. Consequently, this specimen could serve for the identification of some still undetermined parasites occurring not only on *C. carassius*, but also on *C. auratus*.

As it can be seen in Fig. 1, the type specimen of *G. longoacuminatus* is identical in morphology with the specimens from fins and skin of *C. carassius* from the river Vasyugan, R.S.F.S.R. (leg. Bocharova, 16 September 1972), from Lake Järvere, Estonian S.S.R. (leg. Kasesalu, 14 April 1969), from the river Osoblaha, Czechoslovakia (leg. Ergens, 14 November 1962), from Lake Mácha, Czechoslovakia (leg. Ergens, 7 January 1966) and from ponds near Petrodvorets, R.S.F.S.R. (leg. Kulemina, 31 August—25 October 1973). The same concerns the specimens collected from the fins of *C. auratus* caught from Ugyi nur Lake, Mongolia (leg. Ergens, 24 May 1966) and the river Amur near Khabarovsk, R.S.F.S.R. (leg. Yukhimenko, 15—20th September 1969 and 18th February 1970). The differences in the size of individual hard parts of opisthaptor in all these specimens (Table 1) can be regarded as differences falling within the intraspecific variability.

Table 1. Measurements (in mm) of the hard parts of the opistheptor of *Gyrodactylus longocuminatus* Žitňan, 1964 from *Carassius carassius* and *C. auratus*

	<i>Carassius carassius</i>						<i>Carassius auratus</i>	
	Type material		The River Vasyugan	The Lake Järvere	The River Osoblaha	The Lake Máchovo	The Lake Ugyi nur	The River Amur
	after Žitňan (1964)	our results						
Total length of anchors	0.068—0.071	0.068	0.066	0.070	0.058—0.065	0.065—0.070	0.067	0.062—0.071
Length of shaft	0.049—0.050	0.047	0.047	0.053	0.045—0.048	0.046—0.052	0.049	0.049—0.054
Length of point	0.034—0.036	0.033	0.029	0.034	0.029—0.031	0.033	0.031	0.029—0.033
Length of root	0.021—0.023	0.020	0.021	0.022	0.018—0.021	0.023—0.024	0.023	0.019—0.024
Length of ventral bar	0.006—0.007	0.008	0.007	0.008	0.006—0.007	0.006—0.007	0.007	0.006—0.008
Width of ventral bar	0.027—0.029	0.027	0.024	0.026	0.023—0.026	0.025—0.029	0.025	0.024—0.029
Length of shield	0.015—0.017	0.016	—	—	0.014—0.015	0.014—0.015	0.016	0.014—0.016
Total length of marginal hooks	0.033—0.036	0.029—0.031	0.031	0.032—0.033	0.029—0.031	0.031—0.032	0.029	0.030—0.032
Length of hook proper	0.006—0.007	0.006	0.006	0.006	0.006—0.007	0.006	0.006	0.006

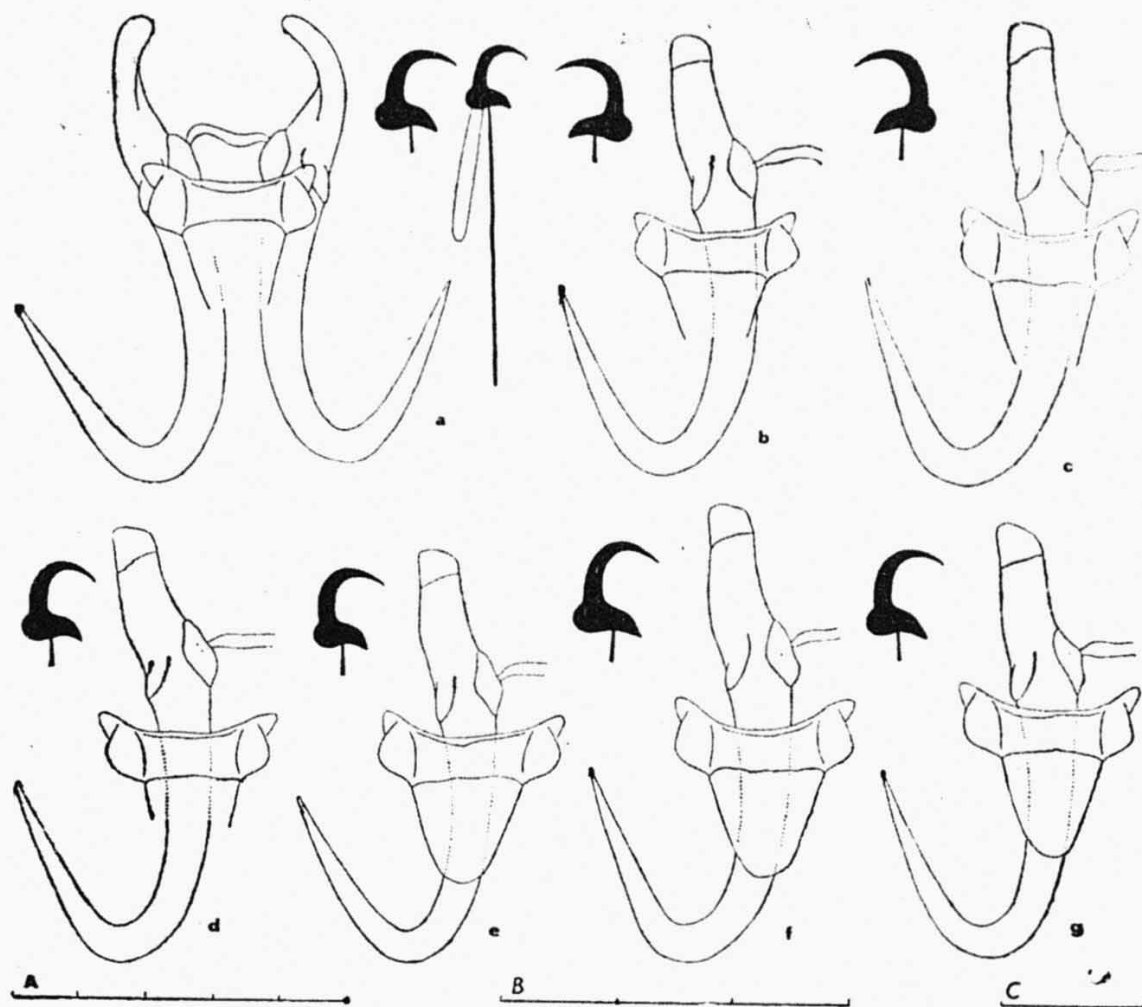


Fig. 1. Hard parts of the opisthaptor of *Gyrodactylus longoacuminatus* Žitňan, 1964 from fins and skin of *Carassius carassius* (L.). a — the River Hron, 29. 8. 1958 (holotype); b — the River Vasyugan, 16. 9. 1972, RSFSR (leg. Bocharova); c — Lake Järvere, 14. 4. 1969, Estonian SSR (leg. Kasesalu); d, e — the River Osoblaha, 30. 3. 1961 and 14. 11. 1962, Czechoslovakia (leg. author); g — the pond near Petrodvorec, 25. 10. 1973, RSFSR (leg. Kulemina). Scales (1 part = 0.01 mm): A — for anchors, B — for marginal hooks, C — for hook proper of marginal hooks.

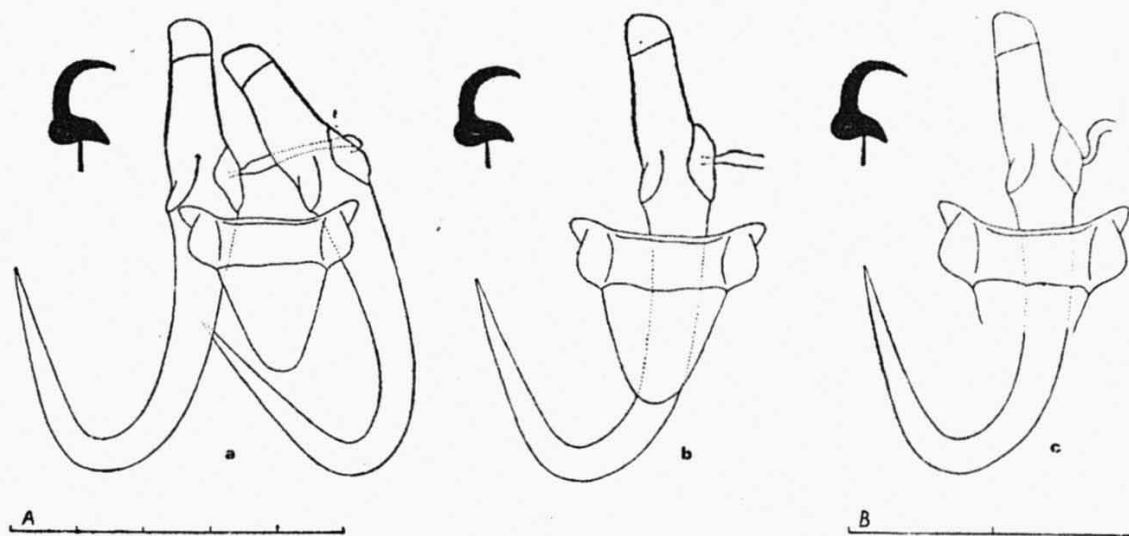


Fig. 2. Hard parts of the opisthaptor of *Gyrodactylus longoacuminatus* Žitňan, 1964 from fins of *Carassius auratus* (L.), a — Lake Ugyi nur, 24. 5. 1966, Mongolia (leg. author); b, c — the River Amur near Khabarovsk, 18. 2. 1970 and 25. 10. 1969, RSFSR (leg. Yukhimenko). Scales (1 part = 0.01 mm): A — for anchors, B — for hook proper of marginal hooks.

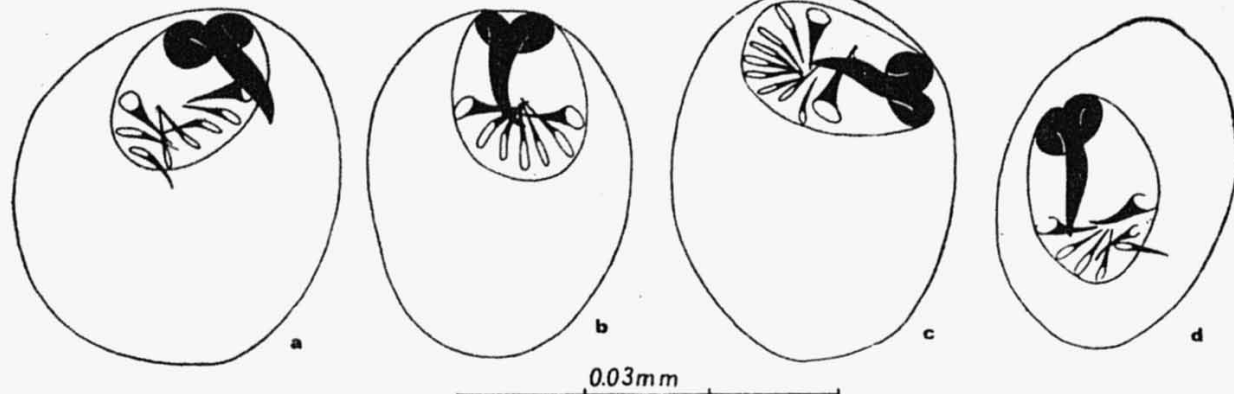


Fig. 3. Cirrus of *Gyrodactylus longoacuminatus* Žitňan, 1964. a, b — from *Carassius carassius* (Lake Máchovo, 7. 1. 1966 and the pond near Petrodvorec, 25. 10. 1973); c, d — from *Carassius auratus* (Lake Ugyi nur, 24. 5. 1966 and the River Amur near Khabarovsk, 25. 10. 1969).



Fig. 4. Comparison of the shape of the hook proper of marginal hooks. a — *Gyrodactylus gobiensis* Gläser, 1974; b — *G. longoacuminatus* Žitňan, 1964; c — *G. varicorhini* Ergens et Ibragimov, 1976.

The new data on the morphology and measurements, together with the original ones published by Žitňan (1964), enabled me to make the following redescription of *G. longoacuminatus* and to confirm the validity of the specific name.

G. longoacuminatus Žitňan, 1964

Figs. 1—3

Redescription: Total length of anchors is 0.058—0.071, length of shaft 0.045—0.054, of point 0.029—0.036 and root 0.018—0.024. The ventral bar possesses well developed lateral processes and 0.014—0.017 long shield is attached to its posterior margin. This bar measures 0.006—0.008 $\times$ 0.023—0.029. The dorsal bar is somewhat narrowed laterally and measures 0.002—0.004 in length and 0.015—0.024 in width. The total length of marginal hooks is 0.029—0.036, their hook proper measures 0.0055—0.007. The cirrus pouch (Fig. 3) is of oval shape and its diameter is 0.018 $\times$ 0.020—0.025 $\times$ 0.035.

ПЕРЕОПИСАНИЕ *GYRODACTYLUS LONGOACUMINATUS* ŽITŇAN, 1964 (GYRODACTYLIDAE: MONOGENEA)

Р. Эргенс

Резюме. Приведено переописание *Gyrodactylus longoacuminatus* Žitňan, 1964 на основе изучения типа и сравнительного материала. Кроме *Carassius carassius* также *C. auratus* считается хозяином этого вида.

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R. E., Parasitologický ústav ČSAV, Flemingovo n. 2, 166 32 Praha 6, ČSSR