

## Synopsis of the species of *Myxobolus* Bütschli, 1882 (Myxozoa: Myxosporea: Myxobolidae)

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### Abstract

A synopsis of 744 nominal species of *Myxobolus* Bütschli, 1882 (Myxozoa, Myxosporea, Myxobolidae) is presented. For each species, the relevant morphometric and morphological data are indicated, as well as the host(s), site(s) of infection within the host and type-locality.

### Introduction

*Myxobolus* Bütschli, 1882 is the largest genus within the Myxosporea. Landsberg & Lom (1991) listed 444 valid species, since which a large number of species have been described. These parasites primarily infect fishes, but a small number of species have been found parasitising amphibians and reptiles.

The species descriptions are scattered in a wide number of journals, some of them difficult to obtain. There are several compilations of species of *Myxobolus* (see Hoffman et al., 1965; Grinham & Cone, 1990; Cone & Raesly, 1995; Gioia & Cordeiro, 1996; Fomena & Bouix, 1997; Chen & Ma, 1998). However, these compilations include only the parasites of certain groups of fish, or parasites infecting fish from a particular geographical area. Therefore, when examining new material, comparison with known species may not be easy. For these reasons, the present authors considered that a synopsis of *Myxobolus* species, which included as much data as possible, would be useful. Consequently, such a synopsis, with tabulated data on spore dimensions, morphology, site of infection within the host, type-host and type-locality, is presented here (Table 1).

For the great majority of the species, the data were taken from the original descriptions. When this was not possible, alternative sources were used, as indicated in the table. Species not sufficiently characterised, and therefore not permitting comparison with other species, were not incorporated into the list. These include *M. unicapsulatus* (Gurley, 1893), *M. mugilis* (Perugia, 1891), *M. merlucii* (Perugia, 1891) and *M. musculi* Keisselitz, 1908.

The authors are aware that, despite their considerable efforts, it is probably not possible to include all the described species, as a small number may have been inadvertently overlooked. It is hoped, however, that such omissions have been kept to a minimum.

A great number of species was described by the original authors only on the spore morphology without data on the size and site of the plasmodia. Moreover, the occurrence of some other species with morphologically similar spores have been recorded from phylogenetically distant fishes. The validity of such species is rather dubious. Nevertheless, the authors believe that it is not the task of the present work to indicate any possible synonymy but to accumulate the necessary data for specialists working on selected groups.

Table 1. Features of *Myxobolus* species.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. abbotinae</i> Ma et al., 1982	16.2 (15.1–17)	9.1 (8.5–10.2)	8.5	9.2 (8.5–10.2)	5.8 (4.2–5.9)	≠	B	B			gall-bladder	<i>Abbotina kiatingensis</i>	China	
<i>M. abitus</i> Li & Nie, 1973	7.9 (7.2–8.6)	9.5 (9.0–9.8)	5.3 (4.8–5.4)	4.5 (4.2–4.8)	3.3 (3.0–3.6)	≠	5–6	D	0.336–0.5 × 0.56–0.182	f	almost all organs	<i>Aristichthys nobilis</i>	China	139
<i>M. absomus</i> Cellere et al., 2002	15.7	10.2		6.4	3.6	≠	5	B	1–2	a	free in opercular cavity	<i>Pimelodus maculatus</i>	Brazil	1
<i>M. acanthogobii</i> Hoshina, 1952	9.8 (7.9–11.8)	8.0 (6.6–9.5)	6.1 (5.3–7.1)	3.5 (2.9–4.2)	2.2 (1.8–2.9)	=		B	0.09–0.8 × 0.07–0.5	k	surface nervous system	<i>Acanthogobius flavimanus</i>	Off Japan	
<i>M. acanthopagri</i> Lom & Dyková, 1994	9.5 (9–10.2)	7.5 (7.1–7.8)	5.4–6.5	4.1 (3.2–4.4)	2.4 (2–2.6)	=	3	B	up to 2 × 4	b	subepithelial connect. tissue	<i>Acanthopagrus australis</i>	Off Australia	82
<i>M. acanthocephali</i> Nie & Li, 1973	10.2 (9.6–10.8)	6.8 (6.0–7.2)	5.0 (4.8–5.2)	4.7 (3.8–5.4)	2.5 (2.4–2.6)	≠	6–7	B	0.1	c	almost all organs	<i>Achelognathus chankaensis</i>	China	144
<i>M. achelognathi</i> (Fujita, 1927)	9	6	12	5.5		≠		A	0.5–0.75	a	skin	<i>Achelognathus lanceolatum</i>	Japan	174
Landsberg & Lom, 1991														
<i>M. achelognathisi</i> Ma & Zhao, 1998	10.2 (8.8–11.2)	6.8 (6.4–8.8)	5.5 (5.4–5.6)	4.4 (4.0–4.8)	2.2 (1.6–2.4)	=		A	0.16 × 0.12	b	gills	<i>Abbotina rivularis</i>	China	
<i>M. achmerovi</i> Shulman, 1966		9–10		4–5.3	2.3–3.5			E				<i>Mugil soiyu, M. cephalus</i>	Off Russia	173
<i>M. actosus</i> Nie & Li, 1973	12.6 (10.8–13.2)	6.4 (5.6–7.2)	5.3 (4.8–6.0)	5.3 (4.8–6.0)	2.8 (2.4–3.4)	≠	5–6	B	0.01–0.015 × 0.3	e, h	gills	<i>Cyprinus carpio haematopterus</i>	China	135
<i>M. acrossocheilisi</i> n. comb. for <i>Myxosoma</i> <i>acrossocheilisi</i>	8.8 (8.0–9.6)	7.2 (7.0–7.3)	4.0 (3.2–4.8)	4.0 (3.8–4.2)	1.6 (1.5–1.8)	=		A	0.1055 × 0.05275	e, d	kidneys	<i>Acrossocheilus yunnanensis</i>	China	
Ma & Zhao, 1992														
<i>M. acutus</i> (Fujita, 1912)	8–10	7–8	5–6	5	4			E			gills	<i>Carassius auratus gibelio</i>	Japan	
Landsberg & Lom, 1991														
<i>M. aeglefini</i> Auerbach, 1906	10.8–11.7	9.9–10.4	7.2–9	4.5–5				E			head cartilage	<i>Melanogrammus aeglefini</i>	Off Germany	
<i>M. africanus</i> Fomena et al., 1985	15.5 (13.6–17.5)	7.3 (5.7–9.0)		6.6 (5.5–9.5)	2.4 (1.6–3.5)	=	5–6	A	variable	b	brain	<i>Hepsetus odoe</i>	Cameroon	98
<i>M. agolus</i> Landsberg, 1985	10.7 (9.8–11.6)	8.4 (7.5–9.2)	6.6 (6.1–7.1)	6.9 (6.1–7.4)	3.4 (3.1–3.8)	=	10–11	A			kidneys, spleen	<i>Oreochromis aureus</i> × <i>O. niloticus</i>	Israel	2
<i>M. aisanensis</i> Chen in Chen & Ma, 1998	11.0 (10.8–12.0)	9.6 (9.4–10)	6.2 (6.0–6.6)	5.0 (4.6–5.4)	3.4 (3.2–3.6)	=	5–6	C			skin, gills	<i>Rhinogobius giurinus</i>	Off China	128
<i>M. alacandatus</i> Yukhimenko, 1986	13.7–15.8	7.4–9.5	7.3–9.5	5.3–7.4	3.1–4.2	≠		B	0.1–1.25	a, c	gills, muscles, fins	<i>Carassius auratus gibelio</i>	Amur basin	207
<i>M. albovae</i> Krasnikova in Shulman, 1966	10.5–13	8–9.5	6–6.5	4.8–5.5	2.7–3.3			E	0.5	a	gills	<i>Leiciscus leuciscus baicalensis</i>	Russia	
<i>M. albarii</i> Donec, 1984	12–15.3	10–12	5.5–6.5	6.8–8.1	3–3.5	≠		E	0.05–1	a, b	fins	<i>Alburnus alburnus</i>	Russia	175
<i>M. adrichietti</i> Su & White, 1994	9.7 (8.4–10.5)	7.7 (7.0–8.4)		4.7 (4.2–5.2)	2.8 (2.8–3.0)	=	6–7	A	0.85–1	h	gills	<i>Adrichietta forsteri</i>	Off Australia	
<i>M. algonquinensis</i> Xiao & Dessler, 1997	14.7 (13.6–15.4)	10.9 (10.1–12.1)	5.8 (5.0–6.9)	5.3 (5.1–5.5)	2.7 (2.5–2.9)	=	4–6	B	up to 9	b, d	ovary	<i>Notemigonus crysoleucas</i>	Canada	
<i>M. altanus</i> Kononov, 1967	9.5–11	8.3–9.5	6.6–7	4–4.4	2.2–2.6	=		E	0.5	b	wall of gall-bladder	<i>Exocoetis lucius</i>	Russia	

<i>M. alievi</i> Gasimagedov, 1970	14-15	11-12	8	6.5-8	3.5-4.5	≠	E	0.5-1	b	muscles	<i>Rutilus rutilus caspicus</i>	Russia	176
<i>M. aligarhensis</i> Bhatt & Siddiqui, 1964	11.4-15.0	6.0-7.9		7.6-9.2	1.2-2.2	=	A	1.5-2.0 × 0.43-0.55	b	accessory respirat. membrane	<i>Ophiocephalus punctatus</i>	India	
<i>M. allaypica</i> Chen in Chen & Ma, 1998	10.9 (10.2-12)	8.8 (7.2-9.6)	6.0 (5.3-6.7)	5.5 (4.8-6.0)	3.6 (3.4-3.8)	≠	D	0.03 × 0.024	b, h	gills	<i>Hypophthalmichthys molitrix</i>	China	
<i>M. amieri</i> Fomena et al., 1985	14.0 (11.3-15.8)	7.4 (5.4-8.7)		8.4 (6.0-10.0)	1.9 (1.4-2.5)	=	A	0.13-0.265 × 0.125-0.25	a, b	spleen, eye	<i>Ctenopoma nanum</i>	Cameroun	96
<i>M. ampullaceus</i> Lalitha Kumari, 1969	9.8 (8.6-10.7)	7.1 (6.4-7.9)		5.8 (5.0-6.4)	2.8 (2.5-2.9)	=	A			dorsal and ventral fins	<i>Barbus kolus</i>	India	
<i>M. amurensis</i> Akherov, 1960	9-13.5	9-12.5		4.5-7	3.8-4.2	=, ≠	E			fins, gut	<i>Cyprinus carpio haematopterus</i>	Amur basin	188
<i>M. andhrae</i> (Lalitha Kumari, 1969)	13.5 (12.1-15.7)	6.4 (5.7-8.6)		9.0 (8.6-10.0)	1.7 (1.4-2.1)	≠	A	1		outer wall of intestine	<i>Ophiocephalus punctatus</i>	India	3
Landsberg & Lom, 1991													
<i>M. anguillii</i> Wu, 1977	10.8-12.4	10.8-12.0	5.6-6.4	4.8-5.6	3.2-4.0	=	D	0.1-0.3	b, c	gills, mouth	<i>Anguilla japonica</i>	China	
<i>M. angustis</i> Kudo, 1934	14-15	7-8	6-7	8-9.5	2.5-3	=	A	0.15 × 0.06 to 0.26-0.1	h	gills	<i>Chloa viglax</i>	USA	
<i>M. anisocapsularis</i> Shulman, 1962	10.5-15.5	7.7-8.4	6-7.1	6-8.5	4	≠	E	2	d, n	gills	<i>Hemibarbus labeo</i>	Amur basin	177
<i>M. anomaliiformis</i> Chen in Chen & Ma, 1998	11.7 (10.8-13.2)	8.3 (7.6-8.6)	6.1 (6.0-6.2)	5.5 (4.8-6.0)	3.3 (3.0-4.2)	≠	D	0.215 × 0.182	b, c	gills	<i>Abbotina rivularis</i>	China	146
<i>M. arabicus</i> Kardousha & El-Tantawy, 2002	8.0-10	6.0-7.0		2.0-4.0		=	A		a	body-cavity	<i>Plectrochinchus schotaf</i>	Off Qatar	
<i>M. arcticus</i> Pugachev & Khokhlov, 1979	14.3-16.5	9.5-10.3	7.6-7.7	6-6.9	2.5-3.5	=	E		c, d	brain	<i>Oncorhynchus</i> sp., <i>Thymallus</i> sp.	Siberia	178
<i>M. argenteus</i> nom. nov for Ma, 1998	11.0 (10.6-11.3)	7.8 (7.2-8.4)	5.5	5.7 (5.6-5.8)	2.9 (2.8-3.0)	=	A			spleen	<i>Gnathopogon argenteus</i>	China	286
<i>M. argenteus</i> Lewis, 1968	13.9 (12.7-14.7)	8.6 (8.5-9.7)	6.4 (5.7-7.4)	5.6 (5.1-6.3)	2.9 (2.8-3.4)	=	A	0.3-0.4 to 3.0 × 3.7	b, c		<i>Notemigonus crysoleucas</i>	USA	4
<i>M. argus</i> nom nov. for <i>Myxosoma</i> <i>elliprica</i> Nie & Li, 1992	13.0-15.0	9.4-9.8	7.0	4.2-5.0	2.8-3.0	=	D			intestine	<i>Channa argus</i>	China	249
<i>M. aristichthydis</i> Nie & Yin, 1973	17.4 (16.8-18)	13.3 (12-14.4)	9.8 (9.6-10.2)	11.5 (10.8-12)	8.3 (7.8-9.0)	≠	D	0.55	b, c	gills, intestine, spleen	<i>Aristichthydis nobilis</i>	China	138
<i>M. artus</i> Akherov, 1960	6.5-6.8	9		4	1.8-2	=	E			kidneys	<i>Carassius auratus gibelio</i>	Amur basin	
<i>M. associatus</i> Nemecek, 1926	15	10		7			E		a, b	kidneys	<i>Leporinus mormyrops</i>	Brazil	
<i>M. asymmetricus</i> (Paris, 1912)	10-11	6.5-7		5		=	D			kidney connective tissue	<i>Crenilabrus pavo</i>	Off Italy	
Landsberg & Lom, 1991													
<i>M. attu</i> Sarkar, 1985(a)	13.9 (12.8-15.2)	8.5 (7.5-9.6)		5.9 (4.8-7.2)	3.0 (2.4-4.0)	=	A			intestine	<i>Wallago attu</i>	Bangladesh	
<i>M. atypicus</i> Nie & Li, 1973	14.7 (13.2-16.8)	10.5 (8.5-10.8)	7.0-8.4	8.4 (7.4-9.6)	5.8 (5.4-6.0)	≠	C	0.2887 × 0.21	c	almost all organs	<i>Aristichthydis nobilis</i>	China	166
<i>M. auctus</i> Akherov, 1960	15	10.5-11	6.5	6	4	=	B			body-cavity	<i>Hypophthalmichthys molitrix</i>	Amur basin	240

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. auratus</i> nom. nov. for <i>Myxobolus orbiculatus</i> Chen in Chen & Ma, 1998	15.6 (15–16.2)	14 (13.8–14.4)	9.0–9.6	8.3 (7.8–8.6)	5.5 (4.8–6)	=	6–8	D			kidneys	<i>Carassius auratus auratus</i>	China	230
<i>M. aureatus</i> Ward, 1919	12.4–13.5	6.5–7.5	5	6–7.5		=	6–7	A	1–1.6 × 0.8–1.2	b	fins	<i>Notropis anogenus</i>	USA	
<i>M. australis</i> Chen in Chen & Ma, 1998	18.4 (18–19.2)	13 (12–14.4)	9.8 (9.6–10.2)	9.3 (8.4–10.2)	4.8 (3.8–5.4)	=	8–9	C			stomach, skin	<i>Channa maculata</i>	China	
<i>M. azerbaijanicus</i> Ibragimov, 1977	18.4–20	13.8–15.7		6.1–7.3	5.2–5.9	=		B	small		gills	<i>Barbus lacerta cyri</i>	Caucasus	
<i>M. bogri</i> Negm-Eldim et al., 1999	8.5	5.3		6.1	3.9	=	10–12	A	1.2 × 0.9	b	gills	<i>Bagrus bayad</i>	Egypt	
<i>M. boasianensis</i> Ma in Chen & Ma, 1998	10.7 (10.4–11)	8.3 (8.0–8.8)	6.0 (5.6–6.4)	5.3 (4.8–5.8)	2.9 (2.5–3.0)	≠		B			kidneys	<i>Barbodes wynaadensis</i>	China	
<i>M. barbi</i> Tripathi, 1952	12.6–13.5	9.0	5.5–6.3	3.6–4.5	2.7	=		A			skin	<i>Barbus ticto</i>	India	
<i>M. barbodes</i> Ma, 1998	10.7 (10.4–11.2)	7.8 (7.4–8.0)	7.2	5.2 (5.1–5.6)	2.9 (2.8–3.2)	≠		B			kidneys	<i>Barbodes lacustris</i>	China	
<i>M. barrai</i> Salim & Desser, 2000	11.0 (10.3–11.4)	10.8 (10.0–11.3)	7.1 (6.1–7.5)	6.3 (5.9–7.0)	3.8 (3.2–4.2)	≠	3–4	B	10	d	body wall muscles (intracell.)	<i>Notropis cornutus</i>	Canada	68
<i>M. bartoni</i> Kalavati et al., 2000	7.2 (6.4–8.0)	4.3 (4.0–4.8)		3.6 (3.2–4.0)	1.6	=	3–4	C			trunk muscles	<i>Galaxias maculatus</i>	Off Falkland Isl.	107
<i>M. basitanellaris</i> Lom & Molnár, 1983	7.7–12.2	7.3–9.9	4.5 (4.2–5)	3.2–5.4	2.2–3.3	≠	5–6	A	0.6–0.9		gills	<i>Cyprinus carpio</i>	Hungary	5
<i>M. baeri</i> Chernova, 1970	14–16	9.3–12		5.3–6	2.7–3.3	=		B	0.15–0.42 × 0.1–0.46	b, c	gills, heart, kidneys, liver	<i>Tinca tinca</i>	Russia	
<i>M. belligobie</i> Ma & Zhao, 1998	15.3 (14.4–17.6)	11.1 (10–12.8)	8.2 (8–8.8)	8.4 (8–8.8)	4.3 (4–4.8)	=	7–8	A	0.345 × 0.245	h	gills	<i>Acheilognathus omeiensis</i>	China	
<i>M. bellus</i> Kudo, 1934	10–11	6.5–7	4–5	4–5	1.5–2	=		A	1.8 × 1.2		integument	<i>Carpoides carpio</i>	USA	
<i>M. bengalensis</i> Chakravarty & Basu, 1948	8.5–9.3	6.4–6.8	4.2	4.2–5.4	2.5–3.2	=		A	2.0–4.1	b	gills	<i>Catla catla</i>	India	
<i>M. beninensis</i> Sakiti et al., 1991	12.5 (10.5–14)	7.2 (5.5–9)		6.9 (6–8)	2.2 (1.5–3)	=	8–10	A	0.06–0.25 × 0.1–0.3	a, b	gill arch connective tissue	<i>Sarotherodon melanotheron</i>	Benin	
<i>M. bhadensis</i> Seenappa & Manohar, 1981	9.5 (8.0–11.0)	7.1 (7.0–8.0)	6.0	3.5 (3.0–4.0)	2.2 (2.0–3.0)	≠		A			muscle	<i>Labeo rohita</i>	India	6
<i>M. bibularis</i> (Sarkar, 1985(a))	10.6 (8.8–11.2)	6.3 (4.8–6.7)		5.3 (4.0–6.4)	2.8 (2.4–3.2)	=	5–6	A			gall-bladder	<i>Wallago attu</i>	Bangladesh	
<i>M. bibullatus</i> (Kudo, 1934)	14–15	11.5–12.5	6–7.5	7	3.5	=		A	1.25	j	integument	<i>Catostomus commersonii</i>	USA	241
<i>M. bilineatum</i> Bond, 1938	10.5 (10–12)	9–10	9–10				7–9	A	0.25–1		brain	<i>Fundulus heteroclitus</i>	Off USA	77
<i>M. bilis</i> Akhmerov, 1960	8.5–9	8.5–9		3.5	2.8–3	=		E			gall-bladder	<i>Carassius auratus gibelio</i>	Amur basin	
<i>M. bilongi</i> Fomena et al., 1994	15.3 (14–17)	12.2 (11.3–14)		7.4 (6.5–8)	4.8 (4.0–6.0)	≠	9–10	D	0.15–0.7 × 0.13–0.3	j	gills, fins	<i>Labeo</i> sp.	Cameroon	93
<i>M. bivacillatus</i> Narasimhamurti & Kalavati, 1986	9	9		4.2	3.0	=	6–7	A	4–6 × 2–3	d	intestinal muscles	<i>Clarias batrachus</i>	India	

<i>M. nizeri</i> Bahri & Marques, 1996	14.2 (14–14.5)	14.2 (14–14.5)	6.5 (6–7)	5.8 (5.5–6)	=	6–7	A	0.22–2.3 × 0.4–0.8	d	gills	<i>Mugil cephalus</i>	Off Tunisia			
<i>M. niadleria</i> Chen & Ma, 1998	10.4 (9.8–10.8)	9.1 (8.4–9.8)	6.9 (6.6–7.2)	5.8 (5.4–6.2)	3.4 (3.0–3.6)	=	5–6	B	0.04–0.05 × 0.03–0.047	c	gall-bladder	<i>Carassius auratus auratus</i>	China	154	
<i>M. filiceae</i> Donec & Toziyakova in Shulman, 1984	10.3–14	8.2–11.8	6.5	5.5–7.9	3–4.5		D	0.5–2.5	a, b	gills	<i>Blicca bjoerkna</i> , <i>Abramis sapu</i>	Ukraine		208	
<i>M. bonafi</i> (Bond, 1939) Landsberg & Lom, 1991	13 (12–13.5)	7	4.5	7	2.5–3	=	8–10	A	1 × 2–3	b	gills	<i>Esox masquinongy</i>	USA		
<i>M. hotififormis</i> Chen & Ma, 1998	12.2 (12–13.2)	9.0 (8.6–9.6)	5.5 (5.0–6.0)	4.9 (4.8–5.4)	2.6 (2.4–2.8)	≠	C			skin	<i>Capoeta semifasciolata</i>	China			
<i>M. brachyisporus</i> (Baker, 1963) Landsberg & Lom, 1991	7.3 (7.0–7.5)	12.5 (12–13.5)		3.1 (2.5–3.8)	2.3 (2.3–2.5)	=	A			spleen	<i>Tilapia esculenta</i> , <i>T. variabilis</i>	Uganda			
<i>M. bramae</i> Reuss, 1906	10–12	8–10	4.5–6.5	4–5.5	2.3–3.5	=	4–5	D	0.5–4.5	a, b	gills	<i>Abramis brama</i>	Russia		
<i>M. bramaefornis</i> Akhmerov, 1960	11–12	7–7.5		4.5–5	2.8–3	=	B			kidneys, gut	<i>Hypophthalmichthys molitrix</i>	Amur basin			
<i>M. brachialis</i> (Markovitch, 1932) Landsberg & Lom, 1991	6.8–8.4	5.8–6.4	4.0–4.8	2.5–3.2	1.6–2.0	=	E	0.1–0.15	a, b	gills	<i>Barbus barbus borysichenicus</i>	Ukraine			
<i>M. braziliensis</i> Casal et al., 1996	10.2 (9.4–10.9)	5.2 (4.7–5.9)	3.6 (3.2–4.0)	5.3 (5.0–5.4)	1.4 (1.4–1.4)	=	9–10	A	0.3 × 0.75	h	base of secondary gill lamellae	<i>Bunocephalus coracoides</i>	Brazil		
<i>M. brevifilis</i> nom. nov. for <i>Myxosoma chengkiangensis</i> Ma, 1998	9.4 (8.0–10.4)	7.1 (6.8–7.2)	6.0 (6.8–7.2)	4.8 (4.8–5.0)	2.4 (2.4–2.6)	=	6	A	0.45 × 0.35	b	gills	<i>Tor brevifilis brevifilis</i>	China		271
<i>M. bubalis</i> Otto & Jahn, 1943	13.1–14.7	10.2–11.7		5.8–6.3	2.2–2.9	=	C			intestine	<i>Ictobus bubalus</i>	USA			
<i>M. bakeri</i> Longshaw et al., 2003	14.0 (12.6–15.4)	11.5 (10–12.4)		7.5 (6.8–8.6)	4.2 (3.3–4.6)	=	11–12	D	0.3–0.6	c, h	intervertebral spaces	<i>Leuciscus cephalus</i>	England		290
<i>M. bifinis</i> Upton et al., 1992	9.2 (8.8–9.6)	8.9 (8.6–9.4)	4.0 (3.6–4.4)	4.1 (3.6–4.6)	3.2 (3.0–3.4)	=	3–4	A	up to 0.86 × 0.5		testes	<i>Bufo maculatus</i>	Cameroon		8
<i>M. bulbocondis</i> Masoumian et al., 1996(a)	19 (17.3–19.6)	15.3 (13.8–15.5)	13.8 (13–14.4)	8.4 (8.1–9.2)	5.8 (5.2–6.3)	=	D			heart region	<i>Barbus sharpeyi</i>	Iran			
<i>M. bari</i> Egusa, 1985	10.6 (9.2–11.8)	9.2 (7.9–10.2)	6.6 (5.5–7.3)	4.5 (3.9–5.4)	2.8 (2.5–3.4)	=	3–4	B	0.07–0.40	a, b	brain	<i>Seriola quinqueradiata</i>	Off Japan		74
<i>M. burkinnei</i> Kabré, 1995	12.2	9.3		6.1	3.5	≠	5	D	0.3–4.5	b, d	fins	<i>Labeo conbie</i>	Burkina Faso		94
<i>M. cabdaje</i> (Ghitino, 1962) Landsberg & Lom, 1991	8.5–8.7	6.8–7.0	5.0–5.2	5.4–5.6			A			gills	<i>Leuciscus cephalus cabdaje</i>	Italy			
<i>M. calbasui</i> Chakravarty, 1939	12.4–15	8.2–10	6.2	6.2	4.1	≠	E	0.3–0.35	a	gall-bladder	<i>Labeo calbasus</i> , <i>L. rohita</i>	India		9	
<i>M. calcariferum</i> Basu & Haldar, 2003	6.6 (6.1–7.1)	6.2 (5.7–6.5)		4.2 (3.8–4.5)	2.3 (2.0–2.7)	=	4–5	A	0.4	c	gills	<i>Lates calcarifer</i>	Off India		
<i>M. camerounensis</i> Fomena et al., 1993	16.8 (14–22)	11.9 (10–16)		6.8 (6–8)	3.9 (2.6–4.5)	=	6–7	A		gills, integument	<i>Oreochromis niloticus</i>	Cameroon		95	
<i>M. cantonensis</i> Chen in Chen & Ma, 1998	13.5 (10.8–16)	10 (8.4–11.2)	7.4–7.8	8.9 (6–10.8)	3.7 (3.1–4.8)	≠	6–7	B		gills	<i>Carassius auratus auratus</i>	China			
<i>M. capoeta</i> Chen in Chen & Ma, 1998	14.4 (14.2–14.8)	8.4 (8.2–9.6)	6.2 (6.0–6.4)	5.1 (4.8–5.4)	2.8 (2.6–3.0)	=	6–7	B		gills	<i>Capoeta semifasciolata</i>	China			

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. capsulatus</i> Davis, 1917	10-11	16		11	4			A			visceral connective tissue	<i>Cyprinodon</i> sp.	USA	
<i>M. carassii</i> Klokačewa, 1914	13-17	8-10	5-7	6-7		=		E			liver, intest., body-cav.	<i>Carassius carassius</i>	Russia	
<i>M. carinatus</i> Seenappa & Manohar, 1980(a)	8.6 (8-9)	6.8 (6-7)	5.3 (5-6)	3.8 (3.5-4.0)	2.0	≠		D		e, 1	inner base of hemibranchs	<i>Cirrhina mrigala</i>	India	80
<i>M. carilaginis</i> (Hoffman et al., 1965)	10.2 (9.5-10.5)	8.9 (8.4-9.5)	6.4 (6.3-7.3)	5.3 (5.2-5.6)	3.3 (3-3.5)	=	5-7	A	0.42-1.5	b, c	head cartilage	<i>Lepomis macrochirus</i>	USA	10
Landsberg & Lom, 1991														
<i>M. carlate</i> Chakravarty, 1943	14.5-16.5	6.1	5.1	10.3-12.3	2.0-3.1	=		A	0.045-0.15	a, b	gills	<i>Catla catla</i>	India	11
<i>M. carostomi</i> Kudo, 1923	10-12.7	7.6-10		3.6-5.5	1.3-2.7	=		E		d	muscles	<i>Catostomus commersonii</i>	Canada	111
<i>M. caudatus</i> Ali et al., 2002	17.5 (16.0-19.2)	12.8 (11.0-13.6)		7.4 (6.4-9.0)	3.8 (3.2-4.5)	=	8-9	D	0.5 (0.4-0.6) × 0.3 (0.2-0.3)	b	tail fin	<i>Barbus blynni</i>	Egypt	
<i>M. cephalus</i> (Iversen et al., 1971)	14.1 (14-15)	11.0 (10-11)	9.0 (8-10)	4.7 (4-5)	3.2 (3-4)	=	4-5	A	0.3 × 0.2-2.4 × 11.5	a, f	brain meninges, gill arches	<i>Mugil cephalus</i>	Off USA	12
Landsberg & Lom, 1991														
<i>M. cerebralis</i> Hofer, 1903	9	7	4			=	5-6	A			brain cartilage	<i>Oncorhynchus mykiss</i>	Germany	
<i>M. chakravarti</i> Halder et al., 1983	12.3 (12.2-14.3)	8.8 (7.7-10.5)	8.7 (8.2-8.8)	5.6 (5.5-6.6)	4.3 (3.3-5)	≠	8-9	A	0.39-0.44 × 0.22-0.28	e, f	eye muscles	<i>Catla catla</i>	India	113
<i>M. cheongkiangensis</i> Chen in Chen & Ma, 1998	12.2 (10.8-13.4)	8.8 (8.4-9.6)	7.2 (6.8-7.6)	6.7 (6.0-7.2)	3.4 (3.1-3.6)	=	5-6	B			gall-bladder	<i>Carassius auratus auratus</i>	China	
<i>M. cheongkiangensis</i> Chen in Chen & Ma, 1998	10.3 (9.8-12)	8.3 (7.8-8.6)	6.0 (5.8-6.2)	4.3 (3.6-4.8)	3.7 (3.6-3.8)	≠	4-5	D			gills	<i>Hypophthalmichthys molitrix</i>	China	
<i>M. cheongkiangensis</i> Chen in Chen & Ma, 1998	10.4 (9.6-11.0)	9.1 (8.4-9.6)	6.0	4.9 (4.6-5.4)	2.9 (2.4-3.1)	=	5-7	C			intestine, kidneys	<i>Hypophthalmichthys molitrix</i>	China	129
<i>M. cheongkiangensis</i> Ma et al., 1982	9.6 (9.1-10.6)	12 (11.5-12.1)	7.6	7.1 (6.1-7.6)	4.9 (4.4-5.4)	=	4-5	D			gills, intestine	<i>Misgurnus anguillicaudatus</i>	China	165
<i>M. cheongkiangensis</i> (Kalavati, 1981)	14.5-18	6-6.5		9.0-10.8	2.8-3.2	≠	8	A	0.8-0.1	a, b	fins, body muscles, kidneys, liver	<i>Chaama punctatus</i>	India	104
Landsberg & Lom, 1991														
<i>M. charii</i> Fomena, 2004	14.0 (13-15.5)	11.4 (10.5-12)		7.6 (6.4-8.5)	3.8 (3.2-4.2)	=	8-10	B	0.35 × 0.23	b	skin	<i>Citharus citharus</i>	Tchad	
<i>M. cheisini</i> Shulman, 1962	12.5-13.6	7-8.5		7-7.5	2.5-3	=		D	0.3		gills	Snake-head mullet	China	288
<i>M. cheongkiangensis</i> Chen in Chen & Ma, 1998	10.2 (9.6-12)	9.2 (8.4-9.6)	6.6 (6.2-7.0)	5.6 (4.8-6.0)	3.7 (3.6-4.0)	≠	4-5	D			gills	<i>Hypophthalmichthys molitrix</i>	China	
<i>M. cheongkiangensis</i> Ma, 1998	14.7 (13.6-15.2)	9.9 (9-10.5)	8.0	8.6 (8.2-9.0)	3.6 (3.2-4.0)	≠		B			kidneys	<i>Sinocyclocheilus grahami tingi</i>	Off China	
<i>M. cheongkiangensis</i> nom. nov. for <i>Myxosoma hainanensis</i> Chen in Chen & Ma, 1998	10.4 (10.2-10.8)	7.9 (7.4-8.1)	5.2 (5.0-5.4)	6.0 (5.8-6.2)	2.5 (2.4-2.8)	≠	5-6	B			skin	<i>Capoeta semifasciata</i>	China	272



Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. cognati</i> Cone et al., 1996	13.3 (12–14)	10 (9.5–10.5)	8.5 (8.0–9.0)	6.6 (5.5–7.5)	3.0	=	8–11	A	0.2–0.5	c, d	operculum	<i>Cottus cognatus</i>	USA	14
<i>M. colossomati</i> Molnár & Békési, 1993	11.8 (11.4–12.2)	6.9 (6.6–7.2)	3.7 (3.5–4.0)	6.0 (5.8–6.6)	2.1 (1.8–2.5)	=	7–8	C	0.5–2		gills, liver, muscles	<i>Colossoma macropomus</i>	Brazil	15
<i>M. commersonii</i> (Fantham, 1939)	9.5–16.5	7–11.4		7.7	3.2	=		A			skin	<i>Carostomus commersonii</i>	Canada	
Landsberg & Lom, 1991														
<i>M. comoi</i> Kabrè et al., 1995	11.8	8.9		4.5	2.5	=		A		b	fins, gills	<i>Clarias anguillaris</i>	Burkina Faso	
<i>M. compressus</i> Kudo, 1934	12–14	7–10	7–7.5	5	2.5	=		A	0.3–0.6	e	integument	<i>Notropis bleinnius</i>	USA	
<i>M. concentricus</i> (Ozaki & Ishizaki, 1941)	9.2–9.3	8.4	7.9	3.5	3.1	=	5	A			urinary bladder	<i>Tridentiger obscurus</i>	Japan	
Landsberg & Lom, 1991														
<i>M. conei</i> Lom & Dykova, 1994	8.5 (6.7–10)	9 (7.6–10.4)	7.3 (7–7.8)	4.3 (3.2–5.2)	3 (2.5–3.4)	=	4–5	A	up to 0.8		liver, lumen of bile ducts	<i>Pseudocaranx dentex</i>	Off Australia	83
<i>M. confinnatus</i> Akhterov, 1960	9.5	9.5		5.5	3.5	=		E			brain	<i>Acanthorhadeus asmusi</i>	Amur basin	
<i>M. congesticus</i> Kudo, 1934	9–10	8.5–9.5	6	5.6	2.5–3.5	=		A	0.3–1	a, e	fins	<i>Moxostoma anisurum</i>	USA	
<i>M. cordis</i> Keysseltz, 1908	12	10		4.5		=		B			heart	<i>Barbel</i>		219
<i>M. corneus</i> Cone et al., 1990	9.4 (8.0–10.5)	8.0 (6.5–9.0)		5.3 (4.0–5.5)	2.4 (2.5–3.0)	=	7–8	C			eye	<i>Lepomis macrochirus</i>	USA	
<i>M. conspicuus</i> Kudo, 1929	9–11.5	6.5–8	4.5–5.5	5–7	2–2.5	=		A	0.5–4	c, e	head integument	<i>Moxostoma breviceps</i>	USA	
<i>M. cori</i> El-Matbouli & Hoffman, 1987	12.7–17.7	8.9–10.1		5.1–7.6		=		B			brain	<i>Cottus gobio</i>	Germany	
<i>M. coxii</i> Fantham et al., 1939	10.4–13.2	7.7–9.4		4.1–5.5	1.4–3.2	=		A			eye	<i>Conesus plantbeus</i>	Canada	
<i>M. cristatus</i> Shulman, 1962	9–10.5	6–8	6–8	5–6	4–6	=		E	0.1–0.2	b	gills, skin, muscles	<i>Schizitorax intermedius</i>	Central Asia	190
<i>M. crucefilus</i> (Qadri, 1962)	9–10	8–8.5		4–4.5				A			gills	<i>Labeo fimbriatus</i>	India	
Landsberg & Lom, 1991														
<i>M. ctenopharyngodoni</i> nom. nov.	11.5–13	6.0–7.0	6.5	4.5–5.5	2.0–3.0	=		B			intestine, spleen, kidneys	<i>Ctenopharyngodon idellus</i>	China	169
for <i>M. ovatus</i> Nie & Li, 1992														
<i>M. curthi</i> Penido, 1927	9–11	4–6						E				<i>Pygocentrus nattereri</i>	Brazil	117
<i>M. catus</i> Yokoyama et al., 1995	10.2 (9.3–11.3)	6.0 (5.2–7.2)	4.3 (3.6–4.6)	4.0 (3.1–4.9)	1.9 (1.5–2.1)	=	3–5	D			cartilage	<i>Carassius auratus</i>	Japan	
<i>M. curvatus</i> (Bond, 1939)	10 (9–10)	6 (5–7)	4.5	4–6	1.5–3	=	9–10	A	2–3	a		<i>Esoc masquinongy</i>	USA	273
Landsberg & Lom, 1991														
<i>M. curruca</i> Seenappa & Manohar, 1980(a)	9.8 (8–11)	7.6 (7–8)	5.2 (5.0–5.5)	4.1 (4–5)	2.3 (2–3)	=		D		e, l	beneath scales	<i>Puntius curruca</i>	India	81
<i>M. curruca</i> Haldar et al., 1996	17.0 (13.0–21.1)	6.4 (4.9–8.1)		8.6 (6.5–13)	2.8 (1.6–4.0)	=	5–8	A			gills	<i>Cyprinus carpio</i>	India	







	5-5.5	5-5.5		E	c	brain		Germany
<i>M. encephalicus</i> (Mulsow, 1911) Landsberg & Lom, 1991	9	8	5	3.3	=	A		Cyprinus carpio USA
<i>M. andonassus</i> (Davis, 1947) Grinham & Cone, 1990	14.4 (13.5-15.0) 7.2 (7.2-7.4)	7.5 5.7	8.3 (7.9-8.5) 4.0	4.8 (4.5-5) 2.0 (1.7-2.3)	=	D B	up to 1.5 × 0.3	USA China
<i>M. anoblei</i> Lom & Cone, 1996	8.6 (7.5-9.5)	5.1 (4.5-5.5)	4.4 (3.8-5.0)	2.2 (2.0-3.0)	=	A		Off Japan
<i>M. epizeorhynchus</i> Ma, 1998	14.0 (13.1-14.9)	7.8 (7.0-8.6)	5.9 (5.1-6.5)	4.5 (4.0-4.9)	≠	4-5 A		Israel
<i>M. episaquimalis</i> Egusa et al., 1990	10-11	8.5-9	6	7-7.5	≠	4-5 A		Hungary
<i>M. equariorialis</i> (Landsberg, 1985) Landsberg & Lom, 1991	12.5-14.0	7.4-9.0	6.0-6.5	2.4-3.0	=	B	up to 0.1 0.9 × 0.7	Hungary China
<i>M. ergensi</i> Lom, 1969(b)	10-12	6-6.3	6-6.2	2-2.5	≠	E 1		Anur basin
<i>M. erythrocalteri</i> Nie & Li, 1992								
<i>M. esochium</i> (Akhirmerov, 1960) Landsberg & Lom, 1991	11.2-12.4	6.8-7.2	4.8-5.2	3.0-3.2	≠	9-10 A	0.55-0.8	India
<i>M. esoni</i> (Kalavati & Narasimhamurti, 1984) Landsberg & Lom, 1991	13.0 (12.8-15.0)	6.8 (6.2-8.0)	7.5 (7.0-8.0)	2.3 (1.2-2.5)	≠	7-8	"very small"	Botswana
<i>M. estatsiensis</i> Reed et al., 2002	12.2 (10.2-14.5)	10.5 (8.5-11.9)	5.0 (3.8-6.0)	2.4 (1.7-3.4)	=	4-5 A	0.1-2.0	India
<i>M. etropfi</i> Rajendran et al., 1998	14.4 (12.0-15.6)	9.9 (8.4-10.8)	6.9 (6.0-7.2)	3.7 (3.0-4.8)	=	9-11 A	0.2	USA
<i>M. eucalli</i> (Guilford, 1965) Landsberg & Lom, 1991	10-11	8.7-9.2	5-5.2	3.1-3.3	=	C	0.2	Russia
<i>M. evakimovae</i> Evlanov, 1981	8-9	6-7			=	A		France
<i>M. exignus</i> Thelohan, 1895	9.7-9.9	9-9.1	5.4-5.6	3	=	B	0.5-0.7	Siberia
<i>M. exulatus</i> Pugachev, 1980	11.0 (10.8-12.0)	7.1 (6.4-8.0)	6.8 (6.4-7.2)	3.2 (2.8-3.8)	=	6-7 A	0.5 (0.3-1.0) × 0.4 (0.2-0.7)	Egypt
<i>M. fahimi</i> Ali et al., 2002	13.4 (12.6-14.6)	9.5 (8.3-10.6)	6.8 (6.5-7)	2.4 (2.1-2.8)	=	7-8 A	0.141-0.074 × 0.438-0.337	Australia
<i>M. fallax</i> Browne et al., 2002	13.2-17.3	9.5-10.9	4.5-6.4	2.3-3.6		A	8 × 5	Canada
<i>M. fanchani</i> (Fantham et al., 1939) Landsberg & Lom, 1991	9.1 (8.5-10.0)	6.6 (6.0-7.5)	4.7 (4.5-5.0)	2.3 (2.0-2.8)	=	8-9 B		Spain
<i>M. farionis</i> Gonzalez-Lanza & Alvarez-Pellitero, 1984	13.7 (11.2-17.3)	9.5 (8.1-12.2)	5.8 (4-7.1)	3.1 (2-4)	=	5-6 A		India
<i>M. filamentosus</i> (Haldar, 1981) Landsberg & Lom, 1991								<i>Puntius filamentosus</i>

Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. filamentus</i> (Rice & John, 1943) Grinham & Cone, 1990	13.1	16.3		7.8	6.2	=	14-16	B	0.17-0.20	b	gills	<i>Icriobus bubalis</i>	USA	186
<i>M. jobobi</i> nom. nov. for <i>Myxobolus barbi</i> Fomena, 1985	10.8 (7.3-13.0)	6.0 (5.0-7.0)		5.9 (5.0-7.0)	1.9 (1.4-2.5)	=	6-9	A	0.06-0.29 × 0.075-0.265	a, b	gills	<i>Barbus aspius</i> , <i>B. camptacanthus</i>	Cameroon	250
<i>M. folius</i> Shulman, 1962	10-12.5	9.5-10	7	7-8.5	3.5-4.2	=	B	4			gills	<i>Pseudaspis leptocephalus</i>	Anur basin	
<i>M. foskanensis</i>	10.5 (9.6-11.2)	9.4 (8.6-9.8)	6.6 (6.2-6.8)	5.9 (4.8-6.0)	2.9 (2.6-3.2)	=	6-7	C			kidneys	<i>Cirrhinus molitorella</i>	China	
Chen in Chen & Ma, 1998														
<i>M. fotoi</i> Fomena et al., 1993	14.7 (13.4-16)	11.4 (10-13.8)		4.3 (3.8-5)	3.5 (3.2-4.3)	=	5-6	A	0.215-0.432 × 0.19-0.41	a	gills	<i>Oreochromis niloticus</i>	Cameroon	
<i>M. fijitai</i> nom. nov. for <i>Lentospora angulilli</i> Fujita, 1929	9.2	8.4	4.9			=			0.71 × 0.83 (the larger)		fins, dorsal side of body	<i>Anguilla japonica</i>	Japan	75
<i>M. jandali</i> (Hahn, 1915) Kudo, 1920	14	8	6	8	2			A	0.15; 0.264 × 0.36	a	gills	<i>Fundulus heteroclitus</i> , <i>F. majalis</i>	USA	
<i>M. finsienensis</i>	9.5 (8.8-10.4)	7.0 (6.8-7.2)	5.8 (5.6-6.4)	4.6 (4.2-5.4)	2.2 (2.0-2.4)	=	5	A	0.518-0.752 × 0.434-0.501	b, c	gills	<i>Spinibarbus denticulatus</i> <i>yunnanensis</i>	China	
n. comb. for <i>Myxosoma finsienensis</i> Ma, 1998														
<i>M. galopsii</i> Langdon, 1990	13	7.5-8.0	5.5-6.0	8.5-9.0	2.0-2.5	=	11-12	A	0.05-0.55		subcutaneous connect. tissue	<i>Galopis marmoratus</i>	Australia	21
<i>M. gallatus</i> Iglesias et al., 2001	10 (8.5-11)	8.8 (8.2-9.5)	5.7 (5-6)	4.9 (4.5-5.5)	2.9 (2.7-3)	=	7-8	D	up to 2.4 × 0.5	d	central venous sinus of branchial filament	<i>Chondrostoma polylepis</i>	Spain	
<i>M. galaxii</i> Seidat, 1953	13-15	8.8-10				=		E		c	all organs except gills	<i>Galaxias maculatus</i>	Argentina	
<i>M. gallatus</i> Landsberg, 1985	11.9 (10.3-13.1)	9.1 (7.9-10.0)	6.5 (5.8-7.0)	3.5 (3.1-4.0)	2.8 (2.3-3.1)	=	4-5	A			kidneys, spleen	<i>Sarotherodon galilaeus</i>	Israel	
<i>M. gandlensis</i> Fall et al., 2000	11.3 (10-12)	10.3 (9-12)				=		A			kidneys	<i>Tilapia guineensis</i>	Senegal	22
<i>M. gangalli</i> (Sarkar et al., 1982) Landsberg & Loom, 1991	8.7 (8.0-10.0)	5.0 (4.8-6.5)	4.6 (3.5-5.5)	3.6 (2.8-4.6)	1.9 (1.5-2.5)	≠	5-6	A			head cartilage	<i>Sillago maculata</i>	Off India	23
<i>M. gariepinus</i> Reed et al., 2003	13.9 (13.7-15.0)	10.8 (10-11.2)		6.2 (6.0-6.2)	3.5 (3.0-3.7)	=	5-6	A	2-3	a	ovary	<i>Clarias gariepinus</i>	Botswana	
<i>M. garrae</i> Ma et al., 1982	9.4 (8.8-9.6)	8.6 (8.0-9.6)	6.1 (5.6-6.4)	4.1 (4.0-4.5)	2.4 (2.2-2.6)	=		C	0.425 × 0.123; 0.8 × 0.715	f, h	fins, mouth	<i>Garra pingi pingi</i>	China	
<i>M. gibbosus</i> Herrick, 1941	11.9 (10.6-12.3)	10.9 (9.8-12.3)	7.1 (6.5-8.2)	6.5 (5.7-7.4)	3.3-4.1	=	8-12	A	0.75		gills	<i>Eupomotis gibbosus</i>	USA	
<i>M. gibelio</i> Yukhimenko, 1986	10.5-12.6	7.4-10	6	3.6-5.3	2.6-3.5	=		B	0.15-0.20	b, c	gills, fins, kidneys	<i>Carassius auratus gibelio</i>	Anur basin	
<i>M. gibbelioi</i> Wu & Wang, 1982	9.0-11.7	9.5-13.5	5.4-8.1	5.4-6.3	4.8-5.4	=	5-6	B	0.14 × 0.09	c	gills	<i>Carassius auratus gibelio</i>	China	
<i>M. gigi</i> (Fujita, 1927) Shulman, 1962	12	6	5	7		=		A	0.08-0.1	a	kidneys	<i>Fluvidraco nudiceps</i>	Japan	
<i>M. girillae</i> Lom & Dyková, 1994	12.2 (11.8-13)	8 (7.7-8.4)	5.5-6.5	5.9 (5.5-6.5)	2.9 (2.6-3.1)	=	3-4	B			kidneys, pyloric caeca	<i>Girella tricuspidata</i>	Off Australia	







Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. ichkeulensis</i> Böhri & Marques, 1996	13.5 (13-14)	12.5 (12-13)	5.5 (5-6)	4.2 (4-4.3)	=	7-8	A	2.2-4 × 1-3			gills arches	<i>Mugil cephalus</i>	Off Tunisia	90
<i>M. inami</i> Ali et al., 2002	10.7 (10.4-11.6)	7.6 (7.2-8.0)	5.9 (5.2-6.2)	2.9 (2.4-3.2)	=	9	A	0.23-average diameter			kidneys	<i>Laboe niloticus</i>	Egypt	
<i>M. impressus</i> Miroschnichenko, 1980	10.5-13.7	9.2-11	6-7.5	5.5-6.8	=		E				fins, gills	<i>Barbus barbatus</i> , <i>Leuciscus cephalus</i>	Ukraine	
<i>M. improvisus</i> Izumova in Shulman, 1966	6.5-7.7	7.5-9.3	4.6-5.6	2-3.3	≠		E	1.5-average diameter		a	muscles	<i>Leuciscus idus</i>	Ukraine	194
<i>M. inaequalis</i> Gurley, 1893	11	7			≠		E					<i>Pimeleodus clarias</i>	Guyana	
<i>M. inaequus</i> Kent & Hoffman, 1984	19.8 (15.6-22)	8.6 (7.8-9.3)	8.0 (7.7-8.5)	11.8 (9.4-13)	3.6 (3.1-3.9)	≠	B				brain	<i>Eigmannia virescens</i>	Brazil	29
<i>M. indiae</i> (Lalitha Kumari, 1969) Landsberg & Lom, 1991	13.7 (12.4-15.0)	7.3 (6.4-8.6)	5.9 (5.7-7.1)	2.1 (1.4-2.5)	=	8-10	A	1-2			gills	<i>Barbus sarana</i>	India	30
<i>M. indicus</i> Tripathi, 1952	9.5-10.8	7.5-8.2	5.5	2.7-3.6	≠		A	0.5-0.7			muscles, liver, intestinal wall	<i>Cirrhina mrigala</i>	India	31
<i>M. indrae</i> (Kundu, 1985) Landsberg & Lom, 1991	12.6 (11.0-14.0)	9.6 (9.0-11.0)	2.4 (2.2-3.0)	4.7 (4.0-6.0)	2.2 (2.0-2.5)	=	8-10	A	0.5-1.0	a, h	head cartilage, tail fin	<i>Cirrhina mrigala</i>	India	
<i>M. inflatus</i> Chen in Chen & Ma, 1998	13.6 (13.2-15.6)	10 (9.6-10.8)	7.5 (6.4-7.5)	5.9 (5.4-6.2)	3.3 (3.0-3.6)	=	6-7	C			gills, kidneys, urinary bladder	<i>Hypseleotris swinhonis</i>	Off China	122
<i>M. infundibulatus</i> Donec & Kulakovskaya in Shulman, 1962	13.4-15.4	11-13	6.9-7.9	4.5-4.8	≠		E				kidneys	<i>Leuciscus cephalus</i>	Danube	195
<i>M. iranicus</i> Molnár et al., 1996	13.6 (13.2-14.0)	8.9 (7.5-9.2)	6.0 (5.6-6.3)	7.3 (6.9-7.5)	3.3 (2.9-3.5)	≠	7	D	up to 0.5-0.6 × 0.3-0.4	h	spleen	<i>Barbus luteus</i>	Iran	32
<i>M. inornatus</i> Fish, 1938	12.3	8.2	5.8	5.2	2.4	≠	E	1-7		b	caudal peduncle muscles	<i>Huro floridana</i>	USA	215
<i>M. insidiosus</i> Wyatt & Pratt, 1963	15 (12.8-17.3)	10.3 (9-11.5)	7.5 (6.4-9)	8.8 (7-10.2)	3.3 (2.6-4.5)	=	A	0.079-0.142 × 0.674			muscles	<i>Oncorhynchus tshawytscha</i>	USA	91
<i>M. insidiosus clarki</i> Wyatt, 1979	12.5 (11.5-13.5)	8.4 (7.5-9.0)	7.4 (7.3-8.4)	8.3 (7.5-9.5)	2.9 (2.5-3.5)		A	0.04-0.14 × 0.016-0.07		b, f	muscle connective tissue	<i>Salmo clarki</i>	USA	
<i>M. interstitialis</i> Kudo, 1929	12-13	10-12.5	8	7.5-8.5	3.5-4	=	10-12	C	1-3	f	intestine	<i>Pomoxis sparoides</i>	USA	
<i>M. irinae</i> Daniyarov, 1975	9.4-10.6	7-7.7	4-5.9	2.4-3	=		B				kidneys	<i>Barbus capito conocephalus</i>	Central Asia	
<i>M. isakovi</i> Shaova, 1969	13-14	8.4-8.8	6.6-7.7	3.3-4.2	=	4	D				kidneys, spleen	<i>Leuciscus cephalus orientalis</i>	Russia	
<i>M. israelensis</i> Landsberg, 1985	12.5 (11.4-13.9)	8.8 (7.6-9.7)	6.9 (6.3-7.4)	7.7 (7.0-8.2)	3.5 (3.2-4.0)	=	7-8	A			kidneys, spleen	<i>Sarotherodon galilaeus</i>	Israel	33
<i>M. intrachondrealis</i> Molnár, 2000(a)	10.2 (9.0-11)	6.5 (6-7)	4 (3.7-4.2)	4.5 (3.7-4.7)	2.2 (2-2.6)	=	9-11	D	0.3-0.5	c, h	cartilage of gill arches	<i>Cyprinus carpio</i>	Hungary	34
<i>M. inucandus</i> Hinc, 1977	11.0-14.5	10.5-11.0	7.1-8.1	6.6-9.5	3.1-4.2	=	A	2.0-5.0 × 0.2-1.2		i	muscles	<i>Galaxias maculatus</i>	New Zealand	





Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. koxiri</i> Herrick, 1936	9.6 (8.8-11.2)	7.4 (6.4-8.0)	5.4 (4.9-5.8)	4.7 (4.1-4.9)	2.5 (2.4-3.3)	≠	13	A	0.75-1.5	b		<i>Micropterus dolomieu</i>	USA	78
<i>M. koilani</i> Molnar et al., 1986	10.3 (8.7-11.7)	7.6 (6.9-8.5)		5.6 (3.9-6.1)	2.7 (2.2-3.4)	=	7-8	A	0.1-0.2 × 0.07-0.12	a, b	subcutaneous connect. tissue	<i>Anguilla anguilla</i>	Hungary	36
<i>M. koaninensis</i> Chen in Chen & Ma, 1998	15.8 (15-16.2)	9.9 (8.4-10.8)	6.2-6.5	7.1 (6-7.8)	3.5 (3-3.6)	=	9-10	B			gills, kidn., liver, spleen, gonad	<i>Clarias batrachus</i>	China	
<i>M. kovali</i> Allamuratov, 1967	7.5-9	6-10	7	3.7-4.5	2.4-3.9	≠		B	0.8-1 × 0.104-0.16	c	gills	<i>Varicorhinus capoeta heratensis</i>	Central Asia	234
<i>M. kozloffii</i> Wyatt, 1979	13.5 (13.5-15.5)	8.6 (8.0-9.5)	7.2 (6.5-7.5)	7.7 (7.5-8.5)	3.2 (3.0-3.5)			B			kidneys	<i>Catostomus luxatus</i>	USA	
<i>M. krabiensis</i> Fomena & Bouix, 1994	21.2 (20.2-23.0)	9.5 (9.0-10.0)		16.1 (14.5-17.6)	15.4 (13.5-16.9)	≠, ≠	19-28	A	0.3-1		a, h	<i>Brycinus longispinnis</i>	Cameroon	279
<i>M. krolkini</i> Konovalev & Shulman in Shulman, 1966	9.6-12	7.5-10.5	6.6-6.9	5-6.6	2.5-4	=		D			abdominal serosa	<i>Salvelinus alpinus</i>	Kamchatka	196
<i>M. kabanicus</i> Bykhovskaya- Pavlovskaya & Bykhovski, 1940	11-13.3	7-9.6	6-8	4-5.6	3-3.5	=		C	small	a	gut, muscles	<i>Carassius auratus gibelio</i>	Kuban River, Russia	274
<i>M. kudoi</i> Guimaraes & Bergamin, 1938	8.5-8.9	6.5-7.3		3.5-4.1	1.3-2.0	=		A	0.5-1.0	a	integument	<i>Nemathognata</i> sp.	Brazil	
<i>M. kaleminae</i> Donec in Shulman, 1984	15-19.5	12-15	8-9.1	7-9	4-5	≠		D	small		muscles, heart	<i>Aspius aspius, Leuciscus leuciscus</i>	Ukraine	197
<i>M. kuaninensis</i> Ma, 1998	8.5 (8.2-8.6)	8.1 (8.0-8.4)	6.0 (5.9-6.2)	4.3 (4.0-4.4)	3.3 (3.2-3.5)	=		B	0.635 × 0.6011	c	gills	<i>Varicorhinus acanthopterus</i>	China	
<i>M. kwangsiensis</i> Hsieh et al., 1993	10.9 (10-11.5)	6.9 (6.4-7.3)	6.0	5.5 (5.1-6.3)	2.9 (2.6-3.1)	≠	4-5	B			gills, kidneys	<i>Labeo rohita</i>	China	
<i>M. kwangtungensis</i> n.comb. for <i>Mixosoma kwangtungensis</i> Chen in Chen & Ma, 1998	17.0 (15.8-18.6)	11.9 (10.8-13)	8.1 (7.8-8.6)	8.4 (7.8-9.6)	3.8 (3.6-3.8)	=	7-9	B			gall-bladder	<i>Clarias batrachus</i>	China	202
<i>M. labrosus</i> Sarkar, 1995	9.2 (8.0-10.0)	7.6 (6.5-9.0)		6.1 (6.0-6.5)	2.7 (2.0-4.0)	≠	5-7	A			mesentery near spleen	<i>Labeo fimbriatus</i>	India	106
<i>M. labiae</i> Nehm-Eldin & Eid in Nehm-Eldin, 1999	10.0	7.5		4.7	3.3	=	5-6	E			gills	<i>Labeo niloticus</i>	Egypt	
<i>M. lairidi</i> Mosser & Noble, 1977	9.9 (9.0-11.0)	9.9 (9.0-11.0)	6.1 (5.0-7.0)	5.0 (4.5-6.0)	1.8 (1.5-2.5)	=	6-8	A			eyes, brain	<i>Coryphaenoides rupestris</i>	Off Norway	
<i>M. lamellus</i> Grinham & Cone, 1990	12.0 (9.5-13.5)	10.5 (9.0-12.0)	7.0 (5.0-8.0)	6.0 (5.0-7.0)	3.5 (3.0-4.5)	=	5-6	C			gills	<i>Catostomus commersonii</i>	Canada	112
<i>M. lampiformis</i> Chen & Ma, 1998	14.5 (14.0-15.0)	12.0 (11-13)	9	7.0 (6.0-7.2)	4	≠	5	A			gills	<i>Aristichthys nobilis</i>	China	

<i>M. lancangensis</i> nom. nov. for <i>Myxosoma</i> <i>obovoides</i> Ma, 1998	9.2 (8.8-9.6)	7.8 (7.5-8.0)	6.0 (5.6-6.4)	4.8 (4.7-4.9)	2.5 (2.4-2.6)	=	A	0.167 × 0.1336 × c	thoracic fin	<i>Varicorhinus acanthopterus</i>	China	253
<i>M. fanfuyongi</i> Ha, 1971	10.8-11.7	10.8-11.7	4.5-5.4	2.7-3.6	=	=	C	a	wall of intestine	<i>Spinibarichthys denticulatus</i>	Vietnam	37
<i>M. latesi</i> Kostogin & Togeubayev, 1994	9.8 (9-10.5)	7.7 (7-8)	3.7 (2.7-4.5)	2.5 (2.3-2.8)	=	=	E		gills, intestine	<i>Lates niloticus</i>	Tchad	
<i>M. latipinnacala</i> Wold & Iversen, 1978	13.1 (12.0-14.0)	8.6 (7.1-9.8)	6.7 (5.7-7.3)	5.1 (3.9-5.9)	2.2 (1.7-2.8)	=	A	0.059	a	<i>Pocilia latipinna</i>	USA	
<i>M. latis</i> Negn-Eldim et al., 1999	21.1	17.2	6.2	5.3	3-4	=	4-7	A	1.3 × 0.8	<i>Lates niloticus</i>	Egypt	254
<i>M. latus</i> Shulman, 1962	7-10	8.4-11	5.2-5.6	4-5.6	3-4	=	C	0.5	a	<i>Hypophthalmichthys molitrix</i>	Anur basin	
<i>M. lazera</i> nom. nov. for <i>Myxobolus clarif</i> Mandour et al., in Negn-Eldim et al., 1999	9-12.2	7.5-9.9	4.1	2.4	2.4	=	5	E	testes	<i>Clarias lazera</i>	Egypt	
<i>M. leiobagrusi</i> Ma & Zhao, 1998	9.6 (9.6-10.0)	7.4 (7.2-8.0)	5.6	4.4 (4.0-4.8)	2.4	=	A		gills	<i>Leiobagrus marginatus</i>	China	
<i>M. leipoensis</i> Ma & Zhao, 1998	9.0 (8.8-9.6)	7.2 (6.4-8.0)	4.8	4.9 (4.4-5.6)	2.2 (2.0-2.4)	=	A		kidneys	<i>Acrossochilus yunnanensis</i>	China	
<i>M. lentisarralis</i> Dyková et al., 2002	11.8 (11.2-12.4)	7.6 (7.2-8.4)	5.2	4.2 (4.0-4.4)	2.5 (2.0-2.8)	=	4		muscle fibres	<i>Carassius gibelio</i>	China	
<i>M. lepomis</i> Li & Desser, 1985	14.5 (12.5-16.5)	9.5 (9-11.5)	7-7.5	5.5 (5-6.5)	3.5 (3-4)	=	5-7	B		<i>Lepomis gibbosus</i>	Canada	
<i>M. leptobotiae</i> Ma, 1998	7.2 (6.8-7.4)	6.1 (5.9-6.5)	4.9 (4.0-6.0)	3.7 (3.5-3.9)	1.8 (1.5-2.0)	=	A	0.64-1.2 × 0.11-0.15	f	<i>Leptobotia elongata</i>	China	
<i>M. lepturichthys</i> Ma, 1998	8.7 (7.0-9.4)	7.8 (5.6-8.7)	5.7 (5.6-5.8)	4.1 (3.9-4.2)	2.8	=	B	0.045 × 0.03; 0.206 × 0.11	c	<i>Lepturichthys nicholsi</i>	China	
<i>M. leqingensis</i> Wu, 1998	13.6 (12.9-14.2)	9.4 (9-9.6)	5.5 (5.2-5.8)	6.2 (5.8-6.4)	3.3 (3.0-3.6)	=	5-6	B	b, c	<i>Clarias batrachus</i>	China	
<i>M. leshanensis</i> Ma & Zhao, 1992	10.4 (9.6-12)	8.5 (8-8.8)	5.2 (4.8-5.6)	4.9 (4.8-5.2)	2.0 (1.8-2.4)	=	B	0.1595 × 0.143	b, c	<i>Varicorhinus angustistomatus</i>	China	
<i>M. leuciscitii</i> Gonzalez-Lanza & Alvarez-Pellitero, 1985	12.2 (11.6-13.1)	7.8 (6.9-8.5)	5.9 (5.4-6.2)	6.5 (6.2-6.9)	3.5 (3.1-3.9)	≠	6-7	B		<i>Chondrostoma polytepis</i>	Spain	70
<i>M. leuciscusi</i> Chen in Chen & Ma, 1998	12	10	7.5	7.5	3.5	≠	6-8	B	0.036-0.15 × 0.02-0.14	<i>Leuciscus wateckii</i>	China	
<i>M. leucorobianus</i> (Fujita, 1927) Landsberg & Lom, 1991	9.1 (8.1-10.1)	7.9 (7.3-8.1)	5.5 (5.1-5.6)	5.0 (4.8-5.6)	2.8 (2.4-3.2)	≠	A	0.158 × 0.138	c	<i>Pseudogobius esocinus</i>	Japan	210
<i>M. liangshanensis</i> Ma & Zhao, 1998	9.9 (9.4-10.8)	7.9 (6.2-8.4)	5.8 (5.5-6.0)	5.1 (4.6-6.0)	3.0 (2.6-3.4)	≠	6-7	B		<i>Garra pingi pingi</i>	China	171
<i>M. liobaensis</i> Chen in Chen & Ma, 1998	8.3 (7.8-8.4)	12 (9.6-12.8)	6.7 (6.6-7.2)	4.3 (3.8-4.8)	3.3 (2.8-3.6)	=	5-6	D	0.05-0.15	<i>Capoeta semifasciata</i>	China	
<i>M. liaoningensis</i> Chen in Chen & Ma, 1998	7.2-7.4	7.2-7.4	4.8-5.0	3.8 (3.6-4.2)	2.8 (2.6-3.0)	=	5	B		<i>Hypophthalmichthys molitrix</i>	China	124
<i>M. lenti</i> (Nie & Li, 1973) Landsberg & Lom, 1991	11.0 (10.2-13.2)	9.3 (8.4-9.6)	7.0 (6.0-7.2)	4.9 (4.8-5.4)	2.8 (2.6-3.4)	=	7-8	B, C		<i>Hypophthalmichthys molitrix</i>	China	203
<i>M. fangluensis</i> Chen in Chen & Ma, 1998						=	7-8	B, C		<i>Aristichthys nobilis</i>	China	127







<i>M. nankiensis</i> Chen in Chen & Ma, 1998	9.1 (9.0-10.8)	7.7 (7.2-8.4)	6	4.8 (4.6-4.9)	2.5 (2.4-2.8)	=	6-7	B		gills	<i>Zacco platypus</i>	China
<i>M. nanyangensis</i> nom. nov. for <i>Myxosoma carassii</i> Hu, 1965	15.4 (12.5-17.5)	10.4 (8.7-12.5)	7.9 (7.5-8.7)	8.3 (6.2-8.7)	3.5 (3.1-3.7)	=	9-10	B	0.08-0.12	c	<i>Carassius auratus auratus</i>	China
<i>M. nanyuensis</i> Chen in Chen & Ma, 1998	18.8 (18-19.2)	8.8 (8.4-9.6)	8.0 (7.2-8.4)	11.4 (10.8-13)	3.6 (3.6-3.8)	≠	9-10	B			<i>Carassius auratus auratus</i>	China
<i>M. narasii</i> (Narasimhamurti, 1970)	12.5-13.5	8.6-9.5		2.9-3.6	1.6-1.8	=		A			gut epithelium	Off India
Landsberg & Lom, 1991	12-14	7-9	5-6	3-5	2-3	=		B			kidneys	Central Asia
<i>M. narzikulovi</i> Dzhalilov & Ashurova, 1971	10.5	6.2		5.2	2.1	=	7-10	A	1.4 × 1.3	b	<i>Nemacheilus stoltzkat</i>	Egypt
<i>M. negundo</i> nom. nov. for <i>Mixobolus synodontis</i> Nغم-Eldim et al., 1999	9-11	8-9	6	5	2	=		A	0.2-1.5		<i>Synodontis schall</i>	Czech Rep.
<i>M. nephroides</i> Li & Nie, 1973	10.2 (9.6-10.8)	9.9 (9.4-10.8)	6 (5.4-6.5)	5.2 (4.8-5.7)	3.5 (3.0-3.8)	≠	6-7	C	0.05		<i>Nemacheilus barbatulus</i>	China
<i>M. neurobius</i> Schuberg & Schröder, 1905	10-12	8	6	6-7		=		E	0.9 × 0.02	c, d	head connective tissue	Germany
<i>M. neurophilus</i> (Guilford, 1963)	13.9 (12-16)	6.2 (6-8.5)	4.9 (4-6)	6.8 (5-8)	1.4-2.4	=		A	0.03 × 0.045 to 0.95	a, b	kidneys, spleen, gall-bladder	USA
<i>M. niei</i> Shulman, 1962	9.5-9.8	9.5-9.8		5.5-5.9	3.1	≠		E			nervous system	China
<i>M. nieii</i> (Nie & Li, 1973)	10 (8-12)	8.6 (8.4-9.6)	6.0	4.7 (4.2-5.0)	2.9 (2.4-3.0)	=	5-6	D	1-1.5;	c, h	<i>Perca fluviatilis</i>	China
Landsberg & Lom, 1991								D	0.15-0.26 × 0.12-0.3		<i>Cyprinus carpio</i>	China
<i>M. nijnei</i> Fomena et al., 1985	16.1 (14.0-20.0)	13.4 (11.6-18)		7.8 (6.5-9.0)	4.5 (3.5-5.4)	=	7-8	D	0.097-0.321	a	optic tectum in midbrain	Cameroon
<i>M. nile</i> nom. nov. for <i>M. nugilis</i> Nغم-Eldim et al., 1999	7.4	7.3		3.6	2.1	≠	6-8	A	2.1 × 0.2	d	gill arch connective tissue	Off Egypt
<i>M. niloticus</i> Fahmy, Mandour & El-Naffar in Nغم-Eldim, 1999	10.2-11	6.3-7.8		5.2-6.8	2.5-3.3	≠		E			fin rays	Egypt
<i>M. ningnanensis</i> Ma & Zhao, 1998	12.9 (12.8-13.2)	6.1 (5.6-6.4)	5.0 (4.8-5.2)	6.9 (6.4-8.0)	2.5 (2.4-2.8)	=		A	0.007 × 0.65;	h	<i>Semilabeo prochilus</i>	China
<i>M. ningpoensis</i> Chen & Ma, 1998	9.8 (9.0-10.5)	11.3 (10-12)	5.7 (5.5-6.0)	4.8 (4.6-5.0)	2.8 (2.7-3.0)	=		A	2.27 × 1.625		gills	China
<i>M. nobilis</i> Li & Nie, 1973	12.7 (12-14)	10.6 (10.2-12)	6.6-6.8	7.4 (7.2-7.5)	5.4 (4.5-5.8)	≠	9	D	0.12	c	almost all organs	China
<i>M. noblet</i> (Sarkar, 1982)	12.7 (11.5-14.3)	9.5 (8.3-10.5)		7.0 (5.8-8.5)	3.7 (3.0-4.5)	=	7-8	A	0.1 × 0.121	b	gall-bladder	India
Landsberg & Lom, 1991	9-10.5	8.5-9.5	7	5-6	2.5-3.5	=		A	0.5-1	c	integument muscles	USA
<i>M. nodosus</i> Kudo, 1934	9	7.2		3.4		=		A	3.5-3.8 × 2.3-2.8	c, d	<i>Pinephales notatus</i>	India
<i>M. nodularis</i> Southwell & Prash, 1918	12.6 (11.7-13)	8.1 (7.8-9.1)	6.3 (5.2-7.2)	3.6 (2.6-3.9)	2.4 (2.2-2.6)	=	4-5	B	5		smooth muscle layer of int. wall	Iran
<i>M. nodulomacrinatus</i> Massoumian, Baska & Molnár, 1996(b)	10.6 (10.4-11.2)	8.4 (7.2-9.6)	6.2	5.0 (4.6-5.2)	3.0 (2.8-3.2)	=		A			gall-bladder	China
<i>M. noemacheilus</i> n. comb. for <i>Mixosoma noemacheilus</i> Ma & Zhao, 1992	13.6	8.5		6.8	2.2			E			gills	Brazil
<i>M. noguehii</i> Pinto, 1928	10.0 (8.1-11.5)	6 (5-7)		3.4 (2.5-4)	2 (1.6-2.7)	=	5-6	B			gills	Benin
<i>M. nokoneensis</i> Sakiti, 1991	9.0 (8.0-11.0)	8.3 (7.2-11.5)		4.4 (3.5-5.5)	3.0 (2.2-3.5)	=		A			caudal muscles	Cameroon
<i>M. nokojuensis</i> Fomena & Boux, 1994	11.8-13.2	7.3-9.5		4.5-6.4	1.8-2.7			A	up to 2		body surface	Canada
<i>M. notropis</i> Fantham et al., 1939								A			<i>Notropis heterolepis</i>	Canada

Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. noumeensis</i> Fomena & Bouix, 2000	14.3 (13–15)	12.8 (11.5–14)		5.8 (5–6.5)	4.5 (4–5)	=	4–5	D			kidneys, spleen	<i>Sarotherodon galilaeus</i>	Cameroon	
<i>M. notemigoni</i> Lewis & Summerfelt, 1964	11.8	8.9	7.5	4.1	3.3	=	6–8	B	0.9–3.0	e	ventral side	<i>Notemigonus crysoleucas</i>	USA	
<i>M. nuvalonensis</i> Salinas et al., 1991	12.0 (10.7–13.7)	7.3 (6.1–7.6)	6.1 (6.1–6.1)	7.6 (6.1–9.1)	3.4 (3.0–4.5)	≠	10–11	E	0.1–0.6	a, b	fin bones	<i>Poecilia mexicana</i> , <i>P. reticulata</i>	Mexico	185
<i>M. nukiangensis</i> Ma, 1998	7.7 (7.2–8)	6.5 (6.4–6.8)	4.8	4.2 (4.0–4.8)	2.9 (2.4–3.2)	=		A			gills	<i>Epiplatys bichonis</i>	China	
<i>M. obscurus</i> Gurley, 1893	8.7–12.5	7.4–11.2	6.2–7.4	4.5–6	2.5–3.7	=		E	0.8	b, d	gills	<i>Alburnus alburnus</i>	France	
<i>M. obliquoides</i> Nie & Yin, 1973	10.8 (10–12)	16.6 (15.6–19)	8.5	9.0 (8.8–9.6)	7.5 (7.4–8.4)	≠	6–7	D			gills, kidneys, spleen	<i>Mylopharyngodon piceus</i>	China	
<i>M. obliquus</i> Kudo, 1934	8–9	7–8	5–6	4.5	2	=		B	0.5–1.8 × 0.06–0.25	i	muscle	<i>Carpionides velifer</i>	USA	
<i>M. oblongus</i> Gurley, 1893	14–17	8.5	5–6					E	< 1	c, h	head integument	<i>Erimyzon succetta</i>	USA	
<i>M. obsoletus</i> Li & Nie, 1973	14.2 (13.8–14.4)	13.5 (13–14.4)	8.4	7.7 (7.2–8.0)	5.8 (5.4–6.0)	=	7–8	D	0.157 × 0.132	c, h	gills, skin, liver, ur. bladder	<i>Cyprinus carpio</i>	China	130
<i>M. obpyriformis</i> Shulman, 1962	12–15	9–12	6	4.5–6		=		B			gills, muscles	<i>Schizothorax intermedius</i>	Central Asia	
<i>M. occaltaris</i> Abu-El-Wafa, 1988 (in Negr-Eldin, Govedich & Davies, 1999)	9.6	8.5		5.6	3.4	=		E			eye	<i>Tilapia</i> sp.	Egypt	
<i>M. ochridensis</i> Georgievich, 1950	17–18	6.5–7		10–11		=		E		d	gills	Lacustrine fishes	Macedonia	
<i>M. ochloensis</i> Chen in Chen & Ma, 1998	12.8 (12–13.2)	9.5 (8.4–10.2)	7.1 (6.6–7.2)	6.6 (6–7.4)	3.2 (3.0–3.6)	≠		B	2.0–9.5	c, e	dorsal fins	<i>Pelteobagrus fulvidraco</i>	China	
<i>M. odontobutius</i> Chen in Chen & Ma, 1998	8.7 (8.4–9.6)	8.8 (8.5–9.8)	6.7 (6.6–7.2)	4.9 (4.8–5.0)	3.5 (3.0–3.6)	=	5–6	C			intestine	<i>Odontobutis obscurus</i>	China	
<i>M. ogilbyi</i> (Johnston & Bancroft, 1919) Landsberg & Lom, 1991	11–13	6–8	5	5–6	2			A	< 1		gill arches	<i>Plectroplites ambigua</i>	England	
<i>M. okobajensis</i> Otto & Jahn, 1943	11.7	10.2–11.7		5.8		=	8	A	0.5 × 0.5; 0.3 × 0.3; 0.2 × 0.2		intestine	<i>Pomoxis sparoides</i>	USA	
<i>M. olidus</i> (Langdon, 1990) Kalavati et al., 2000	9.0–10.0	7.0–8.0	4.0–5.5	4.2–5.0	2.2–2.5	=	6	A	0.05–0.4		spinal cord	<i>Galaxias olidus</i>	Australia	
<i>M. olivifolius</i> Fomena & Bouix, 1994	9.3 (6.3–11.5)	7.2 (5.1–9.4)		5.7 (4.0–7.0)	3.1 (1.8–4.0)	≠	4–5	A			gill arch epithelium, gullet	<i>Barbus aspius</i>	Cameroon	105
<i>M. onetensis</i> Ma & Zhao, 1993	11.8 (11–12.8)	10 (9.6–10.4)	5.2 (4.8–5.6)	4.6 (4.4–4.8)	2.9 (2.8–3.2)	=		C	0.1012 × 0.07771	b	kidneys	<i>Saurogobio dabryi</i>	China	
<i>M. ophiocephalif</i> Ma, 1998	12.0 (11.4–13.6)	6.4 (6.0–6.8)	4.7 (4.4–4.8)	5.2 (4.8–5.6)	1.7 (1.6–2.0)	=	5	A	0.267–1.83 × 0.18–1.67	c	fins, skin, gall-bladder	<i>Ophiocephalus striatus</i>	China	
<i>M. ophiocephali</i> Bhatt & Siddiqui, 1964	11.6–13.3	4.6–6.3		6.7–7.3	1.2–2.0	≠		A	1.5–2.0 × 0.43–0.55	b	accessory respirat. membrane	<i>Ophiocephalus punctatus</i>	India	46
<i>M. openensis</i> Ma & Zhao, 1993	11.6 (11.2–12)	8.8 (8.6–9.0)	5.6 (5.5–5.8)	5.2 (4.8–5.6)	3.2 (3.1–3.3)	=		A	2.051 × 1.956	b	gills	<i>Opsarichthys bidens</i>	China	167
<i>M. opsarichthys</i> Li & Nie, 1973	10.7 (9.9–12)	8.4 (6.0–9.6)	6.1 (6.0–6.2)	4.7 (4.2–4.8)	3.0 (2.8–3.6)	=		B			almost all organs	<i>Opsarichthys bidens</i>	China	155
<i>M. orbiculatus</i> Kudo, 1919	9–10	9–10	6.5–7	6–7.5	2.5–3	=		A			muscles	<i>Notropis gilberti</i>	USA	
<i>M. orbitalis</i> (Fantham et al., 1939) Landsberg & Lom, 1991	13.3–17.5	8–12		4.1–6.4	1.8–3			A			eye	<i>Notropis cornutus</i>	Canada	
<i>M. orientalis</i> Shulman, 1962	19–19.6	10.5–11	8–8.4	12–13.5	3.8–4	=		D	1.5	a	gills	<i>Carassius auratus gibelio</i>	China	
<i>M. orissae</i> Haidar et al., 1996	15.7 (13.0–19.5)	6.8 (4.9–8.1)		8.8 (7.3–11.8)	1.7 (2.4–3.2)	≠		B			gills	<i>Cirrhina mirigala</i>	India	228
<i>M. ornatus</i> Akhmerov, 1960	10	9	6	6	3	=		D			muscles	<i>Acanthorhodeus osmussi</i>	Amur basin	
<i>M. osburni</i> Herriek, 1936	10.1 (9.6–11.2)	11.7 (9.6–12.8)	6.8 (6.4–8.0)	4.8–5.6		=	6–7	A	0.5–1.5	b, c	mesenteries, peritoneum	<i>Micropterus dolomieu</i>	USA	
<i>M. osmanitae</i> Lalitha Kumari, 1969	13.5 (12.0–15.0)	8.6 (7.1–10.0)		5.6 (5.0–7.1)	3.2 (2.9–3.9)	≠	5–6	A	1–1.5		liver, intestine	<i>Barbus punjabensis</i>	India	47



<i>M. osteochilus</i> n. comb. for <i>Myxosoma osteochilus</i> Chen in Chen & Ma, 1998	11.0 (10.2–12.0)	7.7 (7.2–8.4)	5.1	5.0 (4.8–5.8)	2.6 (2.5–2.8) ≠	6–7	B	5.0 (4.8–5.8)	2.6 (2.5–2.8) ≠	6–7	kidneys	<i>Osteochilus salisburyi</i>	China	48
<i>M. osteochilus</i> Chen in Chen & Ma, 1998	11.0 (10.8–12)	7.3 (7.2–7.6)	5.4 (5.2–5.6)	4.8 (4.6–5.0)	2.5 (2.4–2.8) ≠	6–7	C	4.8 (4.6–5.0)	2.5 (2.4–2.8) ≠	6–7	gills	<i>Osteochilus salisburyi</i>	China	241
<i>M. ovidis</i> (Davis, 1932) Grinham & Cone, 1990	15–17	about 15	about 11	about 8–9	6	=	A	0.5–0.9	A	5–6	b, c gills	<i>Ictiobus bubalis</i> , <i>I. cyprinella</i>	USA	71
<i>M. ovatus</i> Kudo, 1934	11.5–13.0	9–10	7	5.5–6.5	2.5–3	=	A	1.5–1; 1–2	A	=	integument	<i>Ictiobus bubalis</i>	USA	287
<i>M. oviformis</i> Thelohan, 1892	10–12	8	6	6	6	=	E		E		fins	<i>Gobio gobio</i>	France	
<i>M. ovoidalis</i> Fantham, 1930	19–26	8–15	6.5–9	11–14	8–4	≠	A	6 × 2 × 1.5	A		subcutaneous tissue	<i>Barbus</i> sp., <i>Cyprinus carpio</i>	South Africa	
<i>M. paludinosus</i> Reed et al., 2002	12.0 (11.2–13.7)	8.6 (7.5–10.0)	7.0	5.7 (5.0–6.8)	2.4 (2.0–2.5)	=	A	0.3	A	6–7	c gills	<i>Barbus paludinosus</i>	Botswana	
<i>M. parabolita</i> nom. nov. for <i>Myxosoma obliquus</i> Ma & Zhao, 1992	10.8 (10.4–11.2)	8.4 (8.0–8.8)	7.0	6.2 (5.6–6.8)	2.6 (2.4–2.8) ≠	≠	A		A		gall-bladder	<i>Parabotia fassata</i>	China	
<i>M. paracuta</i> Ma, 1993(a)	13.2 (12.1–13.6)	9.7 (9.1–10.6)	5.6 (5.5–6.0)	9.4 (8.6–10.4)	5.3 (5.2–6.7) ≠	7	A	0.33 × 0.25	A		b, c gills	<i>Mylopharyngodon piceus</i>	China	
<i>M. paradsicobite</i> Ma, 1998	9.3 (8.8–9.6)	7.4 (7.2–8.0)	5.6	5.7 (5.6–6.4)	2.9 (2.4–3.0) ≠	≠	A		A		kidneys, urinary bladder	<i>Discogobio yunnanensis</i>	China	
<i>M. paradispar</i> Chen in Chen & Ma, 1998	11.3 (9.6–12)	9.0 (8.6–9.6)	6.2 (6.1–6.3)	4.3 (4.0–4.8)	3.5 (2.6–3.6) ≠	5–6	D		D		gall-bladder	<i>Aristichthys nobilis</i>	China	
<i>M. paradisparoides</i> Ma, 1998	16 (15.2–16.8)	9.6 (8.8–10.4)	8.0	8.0 (8–8.8)	4.0	≠	7–8	A	0.18 × 0.957		gills, skin, fins	<i>Schizothorax davidi</i>	China	156
<i>M. paralinoni</i> Li & Desser, 1985	11 (9.5–11.5)	10 (9–11.5)	6.5–7.5	4.4–5	2–2.5	=	B		B	5	heart	<i>Lepomis gibbosus</i>	Canada	
<i>M. parallelepticoides</i> (Fantham, 1939) Landsberg & Lom, 1991	11.4–16.4	7.3–10		4.1–5.5	2.3–3.2		A	10	A		visceral cavity	<i>Pfaffle neogaeus</i>	Canada	49
<i>M. paranensis</i> Bonetto & Pignalberi, 1965	12–15	7–8		6–7	2.5	=	A	0.4–2.0	A		gonads	<i>Salminus maxillofus</i>	Argentina	
<i>M. paramisgurni</i> n. comb. for <i>Myxosoma paramisgurni</i> Wu & Chen, 1987	11.9 (11.2–12.1)	11 (10.7–11.9)	7.1 (6.9–7.3)	5.9 (5.4–6.4)	4.2 (4.1–4.5)	=	4	B	1.5		c kidneys	<i>Paramisgurnus dabryanus</i>	China	
<i>M. paratoyamai</i> Nie & Li, 1992	12.5–14.2	5.5–7.0	5.0	6.2–7.4	2.2–2.5	≠	A		A		nares, ureter	<i>Cyprinus carpio</i>	China	172
<i>M. parenzani</i> (Parezan, 1966) Landsberg & Lom, 1991	5.4 (5–6)	5.4 (5–6)				=		2.5	A		gills	<i>Mugil chelo</i>	Off Italy	
<i>M. parvus</i> Shulman, 1962 Landsberg & Lom, 1991	6.5–7	5.5–6	4–4.2	3.8–4.2	2	=	B	1 × 3	D	1–3	gills	<i>Mugil cephalus</i> , <i>M. soyu</i>	Off China	198
<i>M. pavlovskii</i> (Akhmerov, 1954) Landsberg & Lom, 1991	9–10	10–11.5		5–6	3–3.5	≠	D		D		gills	<i>Hypophthalmichthys molitrix</i>	Amur basin	
<i>M. peachiformis</i> Ma, 1998	16.0 (15.6–16.3)	12.0 (11.4–13)	8.3 (8.1–8.4)	7.9 (7.5–8.4)	4.2 (3.8–4.2)	=	A		A		gills, fins	<i>Zacco platypus</i>	China	150
<i>M. pekingensis</i> Chen in Chen & Ma, 1998	14.3 (13.2–15.6)	10.6 (8.4–13)	7.6 (7.2–8.4)	6.1 (6.0–6.6)	3.5 (3.0–3.6)	=	6–7	D			intestine, liver, kidneys	<i>Carassius auratus auratus</i>	China	
<i>M. pellizoides</i> Li & Desser, 1985	15 (14.5–16.5)	9.5 (8–11.5)	7.5–8	6 (5–7)	3.5 (3–4)	=	7–8	A	1–1.7		gills	<i>Semotilus atromaculatus</i>	Canada	
<i>M. pelteobagrus</i> n. comb. for <i>Myxosoma pelteobagrus</i> Ma & Zhao, 1998	11.2 (10.4–12)	7.6 (7.2–8.0)	4.2 (4.0–4.8)	5.1 (4.8–5.6)	2.5 (2.4–2.8)	=	A	0.147 × 0.106	A		b, c kidneys	<i>Pelteobagrus nitidas</i>	China	
<i>M. peridala</i> (Guilford, 1967) Landsberg & Lom, 1991	15.3 (13.2–16.5)	10.4 (8.8–12.1)	7.8 (6.6–8.8)	6.8 (6–7.7)	3.4 (3.3–4.4)	=	6–7	A	1–1.55		a gill arches	<i>Semotilus atromaculatus</i>	USA	
<i>M. percae</i> Fantham et al., 1939	7.3–10.4	4.1–6.8		3.2–5.5	1.3–2.3		A	1	E		base pectoral fin	<i>Perca flavescens</i>	Canada	
<i>M. percarinae</i> Iskov & Karataev, 1982	10.8–13	7.2–9.6		3.6–4.8	2–2.4		E		E		gills, kidneys	<i>Percarina demidoffi</i>	Ukraine	
<i>M. perocypis</i> Ma, 1998	10.0 (9.6–10.4)	8.4 (8.0–8.8)	5.6 (5.5–5.8)	4.6 (4.0–4.8)	2.4 (2.3–2.5) ≠	≠	C		C		gills	<i>Percocypis pingi</i>	China	
<i>M. perforata</i> Ali et al., 2002	10.4 (9.9–11.3)	5.2 (4.5–5.9)		5.2 (4.0–5.4)	2.4 (1.2–2.7)	=	9	A	6.0 × 0.8		d internal surface of operculum	<i>Hydrocynus forskalii</i>	Off Egypt	
<i>M. permagnus</i> Wegener, 1910	17–20	10–11.5		7–11.2	4–4.5	=	A		A		c gills, opercula, swim-bladder			226
<i>M. persicus</i> Masoumian et al., 1994	10.0 (9.1–10.4)	7.3 (6.5–7.8)	6.3 (5.2–6.5)	5.1 (4.5–5.8)	2.7 (2.6–3.2) ≠	7–8	B	0.5 × 0.8	B		c, h gills	<i>Barbus grypus</i> , <i>B. laurus</i>	Iran	283

Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. petenensis</i> Frey, 1998	11.8 (10.1–13.1)	13.8 (12–15.8)	0.8 (0.7–0.9)	7.1 (6.0–8.0)	5.3 (4.8–5.7) ≠	8–11	≠	8–11	0.1–1.6	b, c	circumorbital integument	<i>Dorosoma petenense</i>	USA	50
<i>M. petruschewskii</i> Zhukov, 1962	11–12	11–12	7–8.2	5.5–6.5	2.7–3.6	=	=	A			cartilage	<i>Myoxocephalus axillaries</i>	Bering Sea	227
<i>M. Pfeifferi</i> Thélohan, 1895	10–13	9–12.2	6.3	5–5.7				B	1.5–2.0	b, c, d, k	muscles, gills, kidneys, spleen body-cavity	<i>Barbus barbuis</i>	Canada	
<i>M. pfrillei</i> (Fantham, 1939) Landsberg & Lom, 1991	12.7–19.1	7.7–11.4		4.5–6.4	1.8–3.2			A				<i>Pfrille neogaeus</i>	USA	51
<i>M. pharyngaeus</i> (Parker, 1971) Landsberg & Lom, 1991	16.5 (15.0–17.0)	5.9 (5.0–6.5)	5.0 (4.2–5.5)	7.2 (6.8–8.0)	1.9 (1.5–2.0) ≠	8–11	≠	A	0.5–1.5	k	pharyngeal epithelium	<i>Gambusia affinis</i>	USA	
<i>M. phoxinacens</i> (Bauer, 1948) Landsberg & Lom, 1991	16–17	10–11		8.5–9	3	=	=	A	1.5	a	gills	<i>Phoxinus czekanowski</i>	Siberia	
<i>M. phyllodes</i> Shulman, 1962	9–10	7–7.5	5–5.5	5.7–6.5	2.8–3.5	=	=	B	0.5	a	abdominal serosa	<i>Hypophthalmichthys molitrix</i>	Amur basin	
<i>M. pima</i> Wu & Chen, 1987	16 (14.8–17.1)	9.4 (8.6–10)	7.4 (7.1–7.6)	7.0 (6.2–7.4)	4.6 (4.0–4.8) ≠	7–8	≠	A	0.5	c, e	fins	<i>Ctenopharyngodon idellus</i>	China	
<i>M. pinnarauti</i> Lalitha Kumari, 1969	9.6 (8.0–11.4)	7.0 (6.5–9.7)		4.4 (3.6–6.4)	1.9 (1.1–2.1) ≠			A			gills	<i>Barbus pinnarautus</i>	India	52
<i>M. plectropterus</i> Akhmerov, 1960 Bancroft, 1919	12–10–12	8–7–8		4–5	2.8–2	=	=	A	0.036–1		kidneys	<i>Carassius auratus gibelio</i> <i>Plectropterus ambiguus</i>	Amur basin England	
<i>M. pleuronectidae</i> Hahn, 1917	14.8	11.9		6	3.7	=	=	D			integument	<i>Pseudopleuronectes americanus</i>	Off USA	
<i>M. poecilichthidis</i> Fantham et al., 1939	12.3–15.4	4.5–6.8		5–7.3	0.9–2.3			A	0.5		fatty tissue attached to gut	<i>Poecilichthys exilis</i>	Canada	53
<i>M. poljanski</i> Shulman, 1962	12–16.3	8.4–10.2	5.6–6.3	6.5–7.5		=	=	B	1–2.5	a, b	gills	<i>Pseudogobio rivularis</i>	China	
<i>M. polycentropsis</i> Fomena et al., 1985	13.2 (11.8–14.4)	7.0 (5.6–10.0)		4.0 (3.5–6.4)	1.7 (1.5–2.3) =	4–5		A	0.13–0.522 × 0.075–0.235	a, b, d	gills arch cartilage	<i>Polycentropsis abbreviata</i>	Cameroon	
<i>M. polymorphosporus</i> Chen & Hsieh, 1960	17.7 (13.9–20)	12.7 (10.4–14)	11.2 (10–12)	8.6 (7.4–10.2)	4.8 (4.3–5.7) =	7–8		B	0.19–0.3	a, b	intestine	<i>Channa maculata</i> , <i>C. argus</i>	China	
<i>M. polymorphum</i> Ma & Zhao, 1998	9.4 (8.8–10.4)	7.3 (7.2–8.0)	5.2 (4.8–5.6)	6.1 (5.6–7.0)	2.8 (2.4–2.8) ≠			A	0.0981 × 0.0818	a	gills	<i>Schizothorax prenaniti</i>	China	
<i>M. poroffilus</i> Adriano et al., 2002	5.7	4.8		1.6	1.1	=		A	3–5	a	body-cavity	<i>Prochilodus lineatus</i>	Brazil	
<i>M. portuacensis</i> Saraiva & Molnár, 1990	12.6 (11.2–15.0)	8.9 (7.5–10.0)	6.8 (5.6–7.5)	5.8 (3.7–7.5)	3.0 (2.5–3.7) =	9–11		A	0.01 × 0.064; 0.36 × 0.45	a, b	caudal and pectoral fins	<i>Anguilla anguilla</i>	Portugal	
<i>M. potaif</i> Lalitha Kumari, 1969	7.2 (6.3–7.9)	5.4 (4.3–6.4)		3.3 (2.9–3.6)	2.0 (1.4–2.1) =	3		B			gills	<i>Labreo potaif</i>	India	
<i>M. pratti</i> (Wyatt, 1979) Landsberg & Lom, 1991	18.2 (17.0–20.5)	12.6 (11.0–14.0)	7.9 (7.5–8.5)	6.6 (5.5–7.5)	3.2 (2.5–3.5) =			A			kidneys	<i>Catostomus luxatus</i>	USA	
<i>M. problematicus</i> Shulman, 1962	9.5–11.5	5.5–6		6	3	≠		E			liver, gall-bladder	<i>Acheilognathus chankaensis</i>	China	199
<i>M. procerus</i> (Kudo, 1934) Landsberg & Lom, 1991	15–17	6.5–7	5–6	7–9	1.5–2	=		A	0.5–1.5; 1–2.5	a, e	integument, caudal fin	<i>Percopsis guttatus</i>	USA	
<i>M. procypris</i> Ma & Zhao, 1998	12.4 (12–12.8)	9.4 (8.8–9.6)	7.7 (7.5–8.0)	5.8 (4.8–6.4)	3.3 (2.8–4.0) ≠			A			kidneys	<i>Procypris rubaudi</i>	China	
<i>M. psepcharis</i> Chen & Hsieh, 1989	16.8 (14.4–19.2)	11 (9.6–12.4)	8.8 (8.4–9.0)	8.5 (7.8–9.6)	4.0 (3.6–4.6) ≠	9–10		D	0.05–0.07	b, h	kidneys	<i>Psephurus gladius</i>	China	
<i>M. pseudobagrus</i> Ma, 1998	18.2 (17–18.7)	10.7 (10–11.9)	8.5 (8.3–8.5)	9.4 (8.5–10.2)	5.1 (4.0–5.1) =			A	0.076–0.078	b, h	buccal cavity	<i>Pseudobagrus pratti</i>	China	
<i>M. pseudobryformis</i> Ma & Zhao, 1998	12.6 (12–12.8)	8.8 (8.0–9.6)	8.0	5.8 (4.8–6.4)	2.9 (2.4–3.2) ≠			A			kidneys	<i>Schizothorax prenaniti</i>	China	
<i>M. pseudodispar</i> Gorbunova, 1936	10–12	7–9.5	5.3–6	4.5–6.2	3–3.7	≠		E		b, d	muscle	<i>Rutilus rutilus</i>	Europe	181
<i>M. pseudogobii</i> Akhmerov, 1960	13.5–15	8.5–9	6	6–7	3–3.5	=		E			muscles, kidneys	<i>Pseudogobius rivularis</i>	Amur basin	
<i>M. pseudokoi</i> Li & Desser, 1985	13.5 (11.5–14)	6.5 (6–7)	5	6.5 (6–7.5)	2.5 (2–3)	=	6–7	A	0.08 × 0.12 to 0.5–0.8	a, b	gills, skin	<i>Notropis cornatus</i>	Canada	

<i>M. pseudomicrosponus</i> Ma & Zhao, 1998	12.0–13.0	6.4–7.0	6.0–6.1	4.8–5.5	2.4–3.0	≠	A		gall-bladder	<i>Acrossocheilus yunnanensis</i>	China	
<i>M. pseudoparnus</i> Li & Nie, 1973	8.6 (8.2–9.6)	8.1 (7.2–9.0)	6.1 (6.0–6.2)	3.7 (3.4–4.0)	2.5 (2.2–2.6)	=	5–6	B	skin	<i>Carassius auratus gibelio</i>	China	131
<i>M. pseudorashorae</i> (Hoshina, 1952)	12.8 (10.8–14.1)	11.3 (9.9–12.6)	6.4 (5.5–7.9)	5.2 (4.0–6.8)	2.8 (2.2–3.1)	=	5–6	B	a, h muscle	<i>Pseudorasbora parva</i>	Japan	
Landsberg & Lom, 1991												
<i>M. pseudosquamae</i> Ma & Zhao, 1998	11.4 (11.2–12)	8.5 (8.0–8.8)	6.1 (6.0–6.4)	5.6	3.0 (2.8–3.2)	=	A	0.12815 × 0.1063	gills, kidneys	<i>Sinocyclocheilus grahami tingi</i>	China	
<i>M. pseudosquamae</i> Chen in Chen & Ma, 1998	11.0 (9.6–12)	9.7 (9.6–10.2)	5.4	5.9 (5.0–6.2)	3.5 (3.0–3.7)	=	5–6	B	gills, caudal fin	<i>Carassius auratus auratus</i>	China	
<i>M. psilorhynchus</i> Lalitha Kumari, 1969	10.0 (9.3–10.7)	9.4 (8.6–10.0)		4.8 (4.3–5.7)	3.2 (2.9–3.9)	≠	6–7	D	d	<i>Psilorhynchus balitora</i>	India	54
<i>M. punctatus</i> Chaudhuri & Chakravarty, 1970	14.5 (12.3–15.0)	6.7 (5.7–7.9)		9.3 (8.6–10.0)	2.6 (2.1–2.9)	=	A	1.0–1.3	a, b	<i>Ophiocephalus punctatus</i>	India	
<i>M. parkynjei</i> Lom & Dyková, 1994	10.5 (10.2–11.0)	8.7 (7.8–9.4)	6.5–7	5.5 (4.6–6.5)	3.1 (2.3–5.4)	=	4–5	A	0.1–0.3	<i>Girella tricuspidata</i>	Off Australia	
<i>M. pygocentrus</i> Penido, 1927	15–16	9–11		9–11	3–4	=	A		intestine	<i>Pygocentrus piraya</i>	Brazil	
<i>M. pyramidis</i> Chen in Chen & Ma, 1998	10.2 (9.6–11.0)	10 (8.4–10.8)	6.0	5.2 (4.5–6.0)	3.3 (3.0–3.6)	=	5–6	B	gills	<i>Carassius auratus auratus</i>	China	
<i>M. pyriformis</i> Ma in Chen & Ma, 1998	11.5 (11.2–12)	6.6 (6.0–7.0)	5.1 (4.8–5.6)	5.4 (4.8–5.6)	2.3 (2.0–2.4)	≠	B		skin	<i>Garra qiaoziensis</i>	China	
<i>M. qiaokiangensis</i> nom. nov. for <i>Myxosoma chinquianensis</i> Chen in Chen & Ma, 1998	17.3 (15.6–18.0)	11.4 (10.6–12)	8.3 (8.0–8.4)	8.6 (7.8–9.6)	3.8 (3.6–4.2)	=	7–9	B	e	<i>Carassius auratus auratus</i>	China	276
<i>M. qionghaiensis</i> nom. nov. for <i>Myxosoma rashorae</i> Chen in Chen & Ma, 1998	10.9 (10.8–11)	9.6	6.0	5.0 (4.8–5.4)	3.5 (3.4–3.6)	=	7–8	D	gills, intestine	<i>Rashora cephalotaenia steimeri</i>	China	258
<i>M. rachmani</i> Allamuratov, 1966	13.5–14.3	11.2–12		7.2–7.5	3.7–3.9	≠	B	0.6–0.8	a	<i>Alburnoides tenuatus</i>	Central Asia	236
<i>M. railhauri</i> Fall et al., 1997	15.3 (14–16)	12.1 (12–13)		5.9 (5–6.5)	3.6 (3–4)	=	B	variable	b	<i>Mugil cephalus</i>	Off Senegal	
<i>M. rancae</i> Guyenot & Naville, 1922	11–12	8–10		4–5	2.5–3.5	=	A		dermis	<i>Rana temporaria</i>	Switzerland	
<i>M. rashorae</i> Chen in Chen & Ma, 1998	7.3 (7.2–7.8)	8.3 (8.2–8.6)	5.3 (5.0–5.6)	3.6 (3.4–3.6)	2.6 (2.2–2.6)	=	B		gills	<i>Rashora cephalotaenia steimeri</i>	China	
<i>M. reniformis</i> Wu & Chen, 1987	10.2 (9.5–11.4)	13.7 (13–14.3)	8.3 (7.9–8.6)	6.9 (6.4–7.4)	5.4 (5.0–5.9)	≠	4–5	C	intestine	<i>Silurus asotus</i>	China	
<i>M. revansis</i> Srivastava, 1979	9.6	8.0	6.4	4.8	3.2	=	D	2	g	<i>Cirrhinus mrigala</i>	India	
<i>M. rhinichthidis</i> Fantham et al., 1939	8.6–11.8	5.9–8.2		3.6–5.5	1.8–2.7		A	about 2	skin	<i>Rhinichthys atronaszus</i>	Canada	55
<i>M. rhinogobii</i> Chen in Chen & Ma, 1998	12.7 (12.0–13.8)	8.9 (7.4–8.4)	5.9 (5.5–6.0)	5.9 (4.8–6.0)	3.0 (2.6–3.4)	=	6–7	B	gills, muscles	<i>Rhinogobius giurinus</i>	Off China	
<i>M. robustus</i> (Kudo, 1934) Landsberg & Lom, 1991	14–16	10–11	7–8	6.5–7	2.5	=	A	1.3	a	<i>Notropis cornutus</i>	USA	
<i>M. rocatiae</i> Basu & Haldar, 2002	18.5 (17.5–19.3)	5.9 (5.6–6.2)		12.9 (11.8–13.7)	2.8 (2.5–3.0)	≠	17–19	A	0.56 × 1.1	<i>Catla catla</i> × <i>Labeo rohita</i>	India	7
<i>M. rohdeti</i> Lom & Dyková, 1994	11 (9.8–11.8)	8.9 (8.4–9.1)	6.5–7	4.3 (3.7–5)	2.8 (2.5–3.1)	=	3–4	A		<i>Mugil cephalus</i>	Off Australia	
<i>M. rohita</i> Haldar et al., 1893	10.6 (9.9–12.1)	9 (8.8–9.9)		6.6	3.3	=	5–6	A	0.22–0.3	<i>Labeo rohita</i>	India	
<i>M. rutilus</i> Domes & Tozzyakova in Shulman, 1984	14–16.5	10.5–13.5	7.4–9.5	4.8–8.4	3–4.5	=	D	0.05–1.5	a, b	<i>Rutilus rutilus</i>	Ukraine	211
<i>M. rutilus</i> Nie & Li, 1973	8.5 (8.0–9.0)	6.8 (6.0–7.8)	4.9 (4.8–5.0)	4.8 (4.6–5.0)	2.5 (2.4–2.8)	=	3–4	B	0.0192 × 0.0092	<i>Aristichthys nobilis</i>	China	161

Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. rotundatus</i> Akhmerov, 1956	8-11	8-11	4.5	4.5-5	3-4	=	=	E	1	a	gut	<i>Cyprinus carpio</i>	Amur basin	
												<i>haematopterus</i>		
<i>M. rotundus</i> Nemezek, 1911	10	9.8	3	3.8-5		=	=	E	1-3 × 1-1.5	b	gills	<i>Abramis brama</i> , <i>Gobio gobio</i>	Germany	
<i>M. sachalinensis</i> (Fujita, 1923) Landsberg & Lom, 1991	9-12	6-8.5	5.5-6	4-5	2-3.5	=	=	E			kidneys	<i>Carcassius auratus gibelio</i>	Japan	182
<i>M. saidovi</i> Gasimagomedov, 1970	10	9-9.5	7	4-4.5	2.5-4.2	=	=	B			gills, kidneys	<i>Alburnus alburnus</i>	Kaspian Sea	
<i>M. salmónis</i> (Hoshina, 1949) Landsberg & Lom, 1991	8.2-10.4	7.4-9.5	5.5-8.3	3.6-5.8	2.1-3.4	=	5-6	D	4 × 2.2	e	lower side of scales	<i>Oncorhynchus keta</i>	Russia	
<i>M. samgoricus</i> Gogobashvili, 1966	9.1-11	7.8-9.2	4.9-5.2	3.1-3.9	1.8-3	=	=	B	0.4-1.5	a, b	fins, gills, kidneys	<i>Varicorhinus capoeta</i>	Caucasus	212
<i>M. saranai</i> (Tripathi, 1952) Landsberg & Lom, 1991	6.4-7	4.5-5	3.2-4.0	3.5	1.5	≠	≠	A	0.27-0.45	1	gills	<i>Barbus sarana</i>	India	56
<i>M. saratherodonti</i> Sakiti et al., 1991	11.4 (9-13)	8.6 (7.5-10)		3.1 (2-4)	2.4 (2-3)	=	=	A	0.1-0.2	a, b, d	gills	<i>Saratherodon melanotheron</i>	Benin	
<i>M. sarcochilichthydis</i> Akhmerov, 1960	12	9	5	5	3.5	≠	≠	E			liver	<i>Sarcochilichthys sinensis lacustris</i>	Amur basin	200
<i>M. sarigi</i> (Landsberg, 1985) Landsberg & Lom, 1991	11.3 (9.9-13.1)	8.4 (7.9-9.6)	5.2 (4.8-5.9)	4.5 (4.1-5.2)	3.2 (2.9-4.0)	=	4-5	A			spleen, kidneys	<i>Oreochromis aureus</i> × <i>O. niloticus</i>	Israel	57
<i>M. saurogobii</i> Feng & Wang, 1990	11.6 (11-12)	8.7 (8.5-9.1)		5.1 (4.5-6.5)	3.1 (2.5-3.2)	≠	3-6	B			kidneys	<i>Saurogobio dumerilii</i>	China	
<i>M. saurogobionis</i> Cai & Wu, 1985	13.0 (11.7-14.3)	10 (7.8-10.4)	8.0 (6.5-9.1)	6.1 (5.2-6.5)	3.4 (2.6-3.9)	=	=	C	0.031-0.3 × 0.024-0.15	e	muscles	<i>Saurogobio gymnocheilus</i>	China	
<i>M. scaploplagi</i> Haldar et al., 1996	14.0 (11.4-17.9)	5.3 (4.0-8.1)		7.1 (5.6-9.8)	2.3 (1.6-3.2)	≠	≠	A			gills	<i>Scatophagus argus</i>	India	37
<i>M. schizopygopsis</i> Dzhalilov & Ashurova, 1971	9-13	9-11	7	5	3	=	10	D	0.5-4	d	gills	<i>Schizopygopsis stoltzkei</i>	Central Asia	
<i>M. schizothorax</i> Ma, 1998	13.4 (13.2-13.6)	8.4 (8.0-8.8)	7.7 (6.4-8.2)	6.7 (6.6-6.8)	4.8	≠	≠	A			fins, gall-bladder, heart	<i>Abbotina kiatingensis</i>	China	157
<i>M. schuberti</i> Li & Desser, 1985	11.5 (8.5-12.5)	8.5 (7.5-10)	6.5	4.5 (3.5-5.5)	2.5 (2-3)	=	5	B		a, b	brain, kidneys	<i>Notropis cornutus</i>	Canada	
<i>M. schulmani</i> Donec, 1962	16.1-19	12.2-14.4	9-10	6-9	5-5.5	=	=	D	1-1.5 × 0.5	d	fins	<i>Abramis sapa</i>	Ukraine	
<i>M. selaroperca</i> (Guilford, 1963) Landsberg & Lom, 1991	16.4 (10-19.2)	8.7 (7.2-9.6)	7.1 (7.2-13)	9.5 (7.2-12.6)	2.4-3.6	≠	6-9	A	up to 5	a, e	dorsal area of eye	<i>Perca flavescens</i>	USA	58
<i>M. semeniformis</i> Ha, 1971	13.2-14.4	4.8-6.0	3.6-4.2	4.5-6	1.4-1.8	=	=	A	up to 4	c	skin	<i>Cirrhina molitorella</i>	Vietnam	
<i>M. semilabae</i> Ma & Zhao, 1993	10.0 (9.6-10.4)	7.3 (6.8-8.0)	5.4 (5.2-5.6)	5.6	3.1 (2.8-3.2)	≠	B	B	0.20208 × 0.12749	b	kidneys, urin. bladder, ureter	<i>Semilabeo prochilus</i>	China	
<i>M. senchowensis</i> Chen in Chen & Ma, 1998	8.1 (7.4-8.4)	6.4 (6-7.2)	3.4-3.5	3.3 (3-3.6)	2.3 (2-2.4)	=	5-6	B			gills	<i>Hypophthalmichthys molitrix</i>	China	
<i>M. serrasalmi</i> Walflker, 1969	14.8 (12.5-18.0)	8.6 (7.0-10.0)		7.7 (6-9)	3.1 (2.5-4)	=	=	A			spleen, kidneys, liver	<i>Serrasalmus rhombus</i>	Brazil	86
<i>M. sessadri</i> Lalitha Kumari, 1968	12.2 (11.4-12.9)	9.0 (8.6-10.0)		5.7	3.6 (2.9-4.3)	≠	≠	D			gills	<i>Labeo fimbriatus</i>	India	99
<i>M. shadqani</i> Molnar et al., 1996	13.9 (13.3-14.1)	13.7 (13.3-14.1)	8.4 (8.3-8.6)	8.2 (7.9-8.3)	5.3 (4.9-5.5)	≠	8	B			gills	<i>Barbus rajanorum</i>	Iran	59
<i>M. shantipuri</i> Basu & Haldar, 2002	7.3 (6.3-8.2)	5.8 (5.2-6.1)		4.0 (3.5-4.1)	2.4 (2.0-2.8)	≠	4-5	A	0.14; 0.09 × 0.1	a, b	gills	<i>Catla catla</i> × <i>Labeo rohita</i>	India	45
<i>M. shantungensis</i> Hu, 1965	7.7 (7.2-8.4)	10 (9.6-10.8)	6.4 (5.8-7.3)	3.6 (3.6-3.8)	2.9 (2.6-3.2)	=	=	D	2-9	c	gills	<i>Aristichthys nobilis</i>	China	123
<i>M. shaochingensis</i> Chen in Chen & Ma, 1998	14.6 (12-15.6)	8.5 (7.2-9.0)	6.4 (6.0-6.7)	6.4 (6.0-6.7)	2.7 (2.6-3.0)	=	8-10	C			kidneys, intestine, stomach	<i>Clarias batrachus</i> , <i>C. argus</i>	China	
<i>M. sharppei</i> Molnar et al., 1996	9.6 (9.2-9.8)	8.1 (8.6-7.5)	4.8 (5.3-4.4)	3.6 (3.3-4.0)	2.8 (2.2-2.4)	=	5	C			gill cartilage	<i>Barbus sharppei</i>	Iran	60
<i>M. steroideidis</i> Abu-El-Wafa in Negm-Eldin et al., 1999	10.8	9.2	4.1	2.9	2.9	=	=	E			viscera	<i>Tilapia</i> sp., <i>Clarias</i> sp.	Egypt	



Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. sprostoni</i> Shulman, 1962	11–13	10–11.7		5.5–7.5	3.5–4	≠		B			gut, serosa	<i>Silurus asotus</i> , <i>Parasilurus</i> sp.	Amur basin	201
<i>M. squamae</i> Keyssellitz, 1908	10–13.5	7.5–10	5–6	4.5–5.5	3	=		D	0.05–1	c, b, d	skin, under scales			229
<i>M. squanaphilia</i> Molnár, 1997	18.7 (17–19.5)	13.6 (13–14)	11.5 (11–12)	6.8 (6.5–7.0)	4.2 (4–4.5)	=	7	D			scales	<i>Abramis brama</i>	Hungary	
<i>M. squamatis</i> (Iversen, 1954)	9.0 (8.1–9.9)	8.6 (7.7–9.9)	6.7 (5.6–7.7)	4.4 (3.9–5.1)	3.1 (2.6–3.9)	=	4	A			scales	<i>Oncorhynchus mykiss</i>	USA	61
Landsberg & Lom, 1991														
<i>M. squamosus</i> Kudo, 1934	8–9	4.5–5.5		3–4	1.5–2	=		B	0.8–2	k	connective tissue below scales	<i>Hybopsis kentuckiensis</i>	USA	
<i>M. stepanovi</i>	12.7–14.2	10.2–11.2	6–7.2	4.9–5.7	2.7–3.1	=		C	0.25–0.33	a	gills, skin, inner organs	<i>Schizothorax intermedius</i>	Central Asia	
Allamuratov & Iskov, 1970								E	1.0		subcutaneous tissue of snout	<i>Pimelodella</i> (?) sp.	Brazil	
<i>M. stokesi</i> Pinto, 1928	8.5	5.3		3.1	1.7						subcutaneous tissue of snout			
<i>M. stomum</i> Ali, 2003	8.5 (7.0–10.0)	6.5 (5.5–7.5)		4.4 (4.0–5.0)	2.4 (2.0–3.0)	=	5–6	A	0.416 × 0.225	b	buccal cavity muscles	<i>Plectrolychnichus gaterinus</i>	Off Egypt	
<i>M. stralkovi</i>	8–12.2	6–11	4–7	3.3–5.4	2–4.1	=		B	1.3–1.5 × 1.9–2	a, b	gills, liver	<i>Phoxinus phoxinus</i> , <i>Leuciscus idus</i>	Russia	
Kostarev & Kulemina, 1971											ventral muscles of pelvic fins	<i>Catostomus commersonii</i>	Canada	62
<i>M. subreticularis</i> Fantham et al., 1939	9.1–11.8	8.2–10		3.2–5	1.8–3	=		A	1.5 × 0.5		subcutaneous tissue	<i>Gobio gobio</i>	Chzech Rep.	223
<i>M. subreticularis</i> Weiser, 1949	8–12	6–10		6	3	=		A	1–2		subcutaneous tissue	<i>Fundulus heteroclitus</i>	Off USA	76
<i>M. subreticularis</i> (Bond, 1938)	15–18	6.5–8	6	7–8	2	≠	11–12	A	0.05–0.3		gills			
Landsberg & Lom, 1991											gills			
<i>M. sutfensis</i> Ma & Zhao, 1998	10.0 (8.8–12)	7.8 (7.2–8.8)	6.5	5.6 (4.8–6.4)	3.2	≠	4–5	A	0.1636 × 0.1227	c	kidneys	<i>Sprinbarbus sinensis</i>	China	
<i>M. suturealis</i> Shulman, 1962	11–12	7.5		6–7		=		D			heart	<i>Schizothorax intermedius</i>	Central Asia	
<i>M. symmericus</i> Rice & Jahn, 1943	10	9.3		3.1	2.3			C			gills	<i>Pomoxis sparoides</i>	USA	
<i>M. synodontis</i> Fomena et al., 1985	13.7 (12.0–15.0)	6.4 (5.8–6.9)		6.2 (5.6–7.0)	1.9 (1.7–2.5)	=		A		a	stomach	<i>Synodontis batesii</i>	Cameroon	
<i>M. taichangensis</i>	18.8 (18–19.4)	11.4 (10.2–12)	9.3 (8.5–10.1)	9.9 (9.6–10.8)	3.7 (3.6–3.8)	=	7–8	B			gall-bladder, front intestine	<i>Carassius auratus auratus</i>	China	149
Chen in Chen & Ma, 1998											kidneys, spleen		Central Asia	213
<i>M. taichangensis</i> Danyarov, 1975	9–1.2	5–8		5–8.3	2–3	≠		C						
<i>M. taihuensis</i> Ma, 1993(b)	10.6–12.2	7.6–10.5	5.0–6.0	4.6–6.9	3.0–4.7	=		A	0.15 × 0.102		gills	<i>Mylopharyngodon piceus</i>	China	
<i>M. taiyangensis</i>	8.3 (8–8.8)	6.8 (6.6–7.2)	6.5	4.8 (4.8–5.2)	3.0 (2.8–3.2)	=		A	0.283–0.384 × 0.2–0.3	h	gills	<i>Schizothorax meridionalis</i>	China	262
nom. nov. for <i>Mixosoma cheni</i> Ma, 1998														
<i>M. talievi</i> Dogiel & Bogolepova, 1957	9.3–12	9–11		3.9–5				B	0.5–5	a	eyes	<i>Batrachocottus nikolskii</i>	Baikal	
<i>M. tamingensis</i>	12.0 (10.8–13.2)	9.7 (8.6–10.8)	5.3 (5.2–5.4)	4.7 (3.6–6.0)	2.8 (2.4–3.2)	=	5–6	D			urinary bladder	<i>Aristichthys nobilis</i>	China	
Chen in Chen & Ma, 1998														
<i>M. tatusiensis</i> Ma & Zhao, 1998	9.7 (9.6–10.4)	8.7 (8–9.6)	6.4	4.1 (4–4.8)	2.7 (2.4–3.2)	=		B	1.625 × 1.2	b	gills, buccal cavity	<i>Zacco platypus</i>	China	
<i>M. tauricus</i>	11.5–14.5	9–11		6–8.5	2.7–3.5	≠		D	0.07–0.47 × 0.09–0.5	a, c	gills, fins, muscles	<i>Barbus tauricus</i>	Ukraine	237
Miroshchenko, 1979														
<i>M. tayehensis</i>	17.6 (16.8–19)	17.6 (16.8–19)	8.5 (8.4–8.6)	9.1 (8.4–9.6)	3.7 (3.6–4.0)	=		B			gall-bladder, intestine	<i>Crenopharyngodon idellus</i>	China	119
Chen in Chen & Ma, 1998														
<i>M. tchangi</i>	11.9 (11.5–12.4)	7.5 (6.6–8.4)	4.8	6.3 (6.0–7.2)	2.3 (2.2–2.4)	=	6–7	B		b	intestine, gall-bladder	<i>Mylopharyngodon piceus</i>	China	
Chen in Chen & Ma, 1998														
<i>M. tengchongensis</i> Ma, 1998	9.3 (8.8–9.6)	7.3 (6.4–8.0)	6.2	3.46 (3.2–4.0)	2.0 (1.2–2.4)	=		A	0.073–0.114; 0.074 × 0.08	b, c	kidneys, urinary bladder, intest.	<i>Discogobio yunnanensis</i>	China	
<i>M. terev</i> Kudo, 1934	9.5–11.5	9–10.5	5–6	6	3	=		A	0.7–1.75	h	muscles	<i>Notropis whipplii</i>	USA	
<i>M. theobanellus</i> Shulman & Vákhrova, 1952	12–14	9–9.5		5.5–6.5		≠		B	1–1.5	a, q	gills	<i>Carassius carassius</i>	Russia	

<i>M. thicklaciae</i> Chen in Chen & Ma, 1998	10.8 (9.6–12.0)	9.5 (9.0–10.8)	6.0	4.7 (4.6–4.8)	3.6 (3.4–3.8)	=	6–7	B		kidneys	China
<i>M. thymalli</i> Kononov in Shulman, 1966	9–11	8–10.5	5.9–7.2	5.2–6.5	2.7–3.6	=		B	0.5	a, b gall-bladder	Kamchatka
<i>M. filipinae</i> Abolarin, 1974	15.0 (12.0–20.0)	9.0 (7.5–11.0)		2.7 (2.0–3.5)	2.2 (2.0–2.5)	=		A	0.2–2	gills, fins	Nigeria
<i>M. fiseae</i> Lom, 1969(b)	9–10	8	up to 6	5.5–6.5	3–3.5	≠	8	B	0.1	kidneys	Hungary
<i>M. tongvaensis</i> Chen in Chen & Ma, 1998	11.0 (9.2–11.6)	7.2 (6.2–7.7)	6.0 (5.7–6.3)	5.8 (4.6–6.9)	2.6 (2.3–3.1)	≠	6–7	A		kidneys	Off China
<i>M. tori</i> Ma, 1998	10 (9.6–10.4)	8.3 (7.2–8.8)	6.9 (6.8–7.0)	6.1 (5.6–7.2)	2.9 (2.4–3.2)	≠		B		kidn., liver, gall-bladd., uri. bladd.	China
<i>M. toyamae</i> Kudo, 1917	15	7–8	5–6	7–8	3–4			A	0.2	gills	USA
<i>M. transovialis</i> Gurley, 1893	6–7	8				=		E		under scales	USA
<i>M. transversalis</i> Fantham et al., 1939	7.7–1.0	9.1–10.5		4.1–5	2.3–3.2			A		muscles of peduncle	Canada
<i>M. triangulum</i> Chen & Ma, 1998	11.3 (10.8–12)	11.1 (10.8–12)	4.2	5.9 (5.4–6.0)	4.8 (3.6–5.4)	=	6–7	A		kidneys	China
<i>M. trichogasteri</i> (Sarkar, 1985(b)) Landsberg & Lom, 1991	15.5 (14.0–17.0)	9.4 (8.7–9.9)		10.1 (9.0–10.5)	3.3 (3.0–3.8)	=	5–6	A		gall-bladder	India
<i>M. tricoctatus</i> Li & Nie, 1973	9.3 (8.4–10.8)	8.5 (7.2–9.0)	6.0–7.2	4.5 (3.6–4.8)	2.9 (2.4–3.0)	=		C		gills, spleen	China
<i>M. tripaliti</i> Kalavati et al., 1981	9.8–10.2	12.0–13.5		5.0–6.0	2.5	=	8	A	0.5–1.0	gut wall, visceral organs	India
<i>M. tripterygii</i> (Laird, 1953) Landsberg & Lom, 1991	12.1 (11.7–12.4)	12.2 (11.7–12.4)		7.3 (6.8–7.8)	4.5 (4.0–4.6)	=	5–6	E		caudal fin subdermal conn. tissue	Off New Zealand
<i>M. tsinguanensis</i> Chen in Chen & Ma, 1998	11.1 (10.2–12)	9.0 (8.4–9.6)	6.9 (6.6–7.2)	4.8 (4.6–5.0)	2.9 (2.4–3.6)	≠	4–5	B		kidneys, gills	China
<i>M. tuberculatus</i> Nie & Li, 1992	13.6–14.2	13.0–14.0	7.0–7.5	6.4–7.2	3.0–4.0	=		C		heart, urinary bladder, ureter	China
<i>M. tumidus</i> Nie & Yin, 1973	12.8 (12–14.4)	18.5 (16.8–20)	8.4	9.8 (9.6–10.6)	8.5 (8.2–9.0)	≠	7–9	D	1.8–2 × 0.5–1	gills, intestine, fins, heart	China
<i>M. tunguensis</i> Chen in Chen & Ma, 1998	15.0 (13.2–16.8)	9.7 (9.0–10.8)	8.5 (7.9–9.0)	5.9 (5.6–6.0)	3.7 (3.0–4.2)	≠	6–7	B		urinary bladder, kidneys	China
<i>M. unicoloratus</i> Akhmerov, 1960	16	6.5		6.5–7	2.6–2.8	=		E		urinary bladder, kidneys	Amur basin
<i>M. turbinoides</i> Georgevich, 1950	15	7		8.5		=		E		gills	Macedonia
<i>M. nistrus</i> Chen in Chen & Ma, 1998	16.7 (16–17.4)	8.9 (8.4–9.6)	5.9 (5.4–6.2)	8.1 (7.4–9.0)	3.0 (2.6–3.4)	=	8–9	B		kidneys	China
<i>M. undulatus</i> Lom, 1969(a)	9–10.5	7–8.5	5–6	5.5	2.2	=		A	0.1	gills	Czech Rep.
<i>M. uniporus</i> Fujita, 1927	12	6	3	7		=		A	0.12	kidneys	China
<i>M. urinae-pladderi</i> nom. nov. for <i>Myxosoma tunguensis</i> Chen in Chen & Ma, 1998	11.3 (10.2–12)	9.3 (8.8–9.8)	5.0–5.4	6.0 (5.8–6.4)	3.3 (3.0–3.6)	≠	6–7	D		urinary bladder	China
<i>M. ussifensis</i> Cone & Anderson, 1977	9 (7–12)	11.5 (10–13)	6.5 (6–7)	4.5 (3–5)	2.5 (2–3)	=	5–7	A			Canada
<i>M. uyeini</i> Ha, 1971	9.9–10.8	8.0–8.5		5.4	2.7	=		C		intestine	Vietnam
<i>M. valatus</i> Li & Nie, 1973	9.4 (8.4–9.6)	8.2 (7.4–8.4)	6.0–7.0	5.0 (4.8–5.4)	3.1 (3.0–3.4)	=	8–9	B	0.163 × 0.1194	c, h gills, intestine, kidneys, skin	China
<i>M. valdagei</i> (Dögel, 1932) Landsberg & Lom, 1991	7.5–9.5	6–6.5		4–4.5		=		B	0.1	a gills	Central Asia
<i>M. vanbilasae</i> Senapata & Manohar, 1980(b)	8–10	7–9	4.6–5	3.1 (3–4)	2.3 (2–2.5)	=, ≠		B	0.45 × 0.33–2.18 × 1.95	b, c below scales, muscles, integ.	India
<i>M. variabilis</i> Jaczò, 1940	10.8 (9.7–12.2)	8.2 (7.5–9.8)	4.9–6.1	4.8	1.9	=		E	0.2–0.5 × 2–5	b, c gills	Hungary

Table 1. Continued.

Species	LS	WS	TS	LPC	WPC	PC	NC	IP	Cyst size (mm)	FC	Infected organ	Type-host	Type-locality	Rem
<i>M. varicorhini</i>	11.8-16	10.6-11.8		5.9-7.1	2.5-4.1	≠		D			skin, kidneys, spleen		Central Asia	238
Dzhaliyov & Daniyarov, 1975														
<i>M. varicorhinus</i> Ma & Zhao, 1993	10.5 (9.6-11.2)	7.6 (7.0-8.0)	5.8 (5.6-6.0)	6.7 (5.6-7.2)	3.2	≠		A	0.16 × 0.14	h	kidneys, ureter	<i>Varicorhinus angusticomatus</i>	China	
<i>M. vastus</i> Kudo, 1934	9-10.5	7.5-8	4.5-5.5	4.5-5.5	1.5-2.5	=		A	2.5; 3.8		integument	<i>Moxostoma aureolum</i>	USA	
<i>M. varius</i> Akhmerov, 1960	9-11	6-11.5		4.5-5	2-3.5	=		E			kidneys	<i>Hypophthalmichthys molitrix</i>	Amur basin	
<i>M. vartanyanae</i> (Donec et al., 1973)	9.5-12.3	8.5-10	7.3-8	4.5-6	2.5-3.3	≠	4-5	B	0.5-3.5 × 0.5-2.5	a, b	muscles, kidneys, liver, spleen	<i>Sabino ischani</i> , <i>S. trutta</i> , <i>Oncorhynchus mykiss</i>	Ukraine	239
Landsberg & Lom, 1991														
<i>M. vedaratiensis</i> Seenappa & Manohar, 1981	13.8 (13.0-15.0)	9.2 (8.0-10.0)	8.0	6.2 (6.0-7.0)	3.4 (3.0-4.0)	≠		D			gills	<i>Cirrhina mirigala</i>	India	65
<i>M. venkateshi</i> Seenappa & Manohar, 1981	9.7 (9.0-10.0)	7.1 (7.0-8.0)	5.0	5.2 (5.0-6.0)	2.0	=		D			gills	<i>Cirrhina mirigala</i>	India	
<i>M. vesvus</i> Akhmerov, 1960	9-10.5	6	4.5	5-6	2.4	=		A	1-1.5		gut, skin	<i>Hypophthalmichthys molitrix</i>	Amur basin	214
<i>M. vesiformis</i> Nie & Li, 1973	12.3 (10.8-15.8)	6.4 (6.0-7.2)	5.0	4.9 (4.6-6.0)	2.0 (1.8-2.4)	=		B			gills, kidneys	<i>Achellognathus macropterus</i>	China	159
<i>M. vorenkhai</i> (Akhmerov, 1960)	15-16	8-9	8	7-7.5	3.5	=		E	small		gills, kidneys	<i>Pseudorasbora parva</i>	Amur basin	
Landsberg & Lom, 1991														
<i>M. wadeckii</i> Yukhimenko, 1986	8.4-9.4	7.3-8.4	5.7-6.3	4.2-4.8	2.2-3.1	=		B	0.1-0.2	a	gills	<i>Leuciscus wadeckii</i>	Amur basin	
<i>M. waniakensis</i> Kazubski & El-Tantawy, 1989	10.0 (9.5-10.8)	8.3 (8.0-9.5)	~6	4.3 (4.0-4.8)	2.2 (2.4-3.0)	=		B	0.1-0.2	a	gills	<i>Lota lota</i>	Poland	
<i>M. wasiganti</i> Bocharova & Donec, 1974	15.1-17.6	10-15.1	7.1-8.8	5.8-7.7	3.3-5	=		D			muscles	<i>Carassius auratus</i>	River Ob	
<i>M. wellerae</i> Li & Desser, 1985	15 (12.5-16.5)	10 (9.5-11.5)	6.5-7	6 (5.5-6.5)	3.5 (3-4)	=	5-6	D		c	muscle	<i>Notropis cornatus</i>	Canada	
<i>M. weishanensis</i> Ma & Chen, 1998	12.2 (10-12.5)	8.2 (7.5-10)	6.0 (5-6.25)	6.1 (5.6-6.25)	2.6 (2.5-3.1)	=	7	A	0.4-0.2		gills	<i>Squaliobarbus curriculus</i>	China	
<i>M. widsatranalis</i> Ma & Zhao, 1993	9.2 (8.8-9.6)	7.4 (7.2-8.0)	6.4	5.4 (4.8-6.0)	2.9 (2.4-3.2)	=		B	0.12 × 0.095	b	gills	<i>Zacco platypus</i>	China	
<i>M. wuchangensis</i> Chen in Chen & Ma, 1998	10.7 (9.6-11.0)	9.1 (8.4-10.2)	6.3 (6.0-6.6)	4.6 (4.6-4.8)	2.6 (2.4-2.8)	=	6-7	B			caudal fins	<i>Cyprinus carpio</i>	China	
<i>M. wucheni</i> (Wu & Chen, 1987)	13.5 (12.9-14.3)	10.1 (9-11.2)	7.4 (6.7-8.1)	5.8 (5.2-7.1)	4.3 (2.4-4.8)	≠		B			kidneys, gills	<i>Cyprinus carpio</i>	China	145
Landsberg & Lom, 1991														
<i>M. wuhanensis</i> Chen in Chen & Ma, 1998	12.4 (11.4-14.4)	8.9 (8.4-10.8)	7.0 (6.6-7.2)	6.5 (4.8-7.2)	3.6 (3.4-3.8)	≠	5-6	B			kidneys, gall-bladder	<i>Carassius auratus auratus</i>	China	
<i>M. wuhanensis</i> Wu & Chen, 1987	9.5 (9.0-9.8)	6.9 (6.7-7.1)	4.4 (4.3-4.8)	4.3 (3.8-4.3)	2.0 (1.9-2.1)	=		C			intestine	<i>Silurus asotus</i>	China	
<i>M. wuli</i> (Wu & Li, 1986)	17.6 (15.6-19.2)	10.5 (9.6-10.8)	8.1 (7.2-8.6)	9.5 (8.4-10.2)	4.0 (3.6-4.2)	=	9-11	B	30 × 20	e	gills, spleen, body-cavity	<i>Carassius auratus auratus</i>	China	204
Landsberg & Lom, 1991														
<i>M. wushengensis</i> Chen in Chen & Ma, 1998	11.0 (10.8-12)	8.7 (8.2-9.6)	6.5 (6.2-6.6)	6.8 (6.0-8.2)	3.2 (2.6-3.6)	≠	5-7	B			kidneys, intestine	<i>Carassius auratus auratus</i>	China	
<i>M. xenocypris</i> Li & Wu, 1983	12.4 (11.3-13.3)	7.8 (7.3-8.0)	6.1 (6.0-6.7)	4.9 (4.0-5.3)	2.4 (2.0-2.7)	=	6-8	C	1.5-3.0		gills	<i>Xenocypris davidi</i>	China	67
<i>M. xizoi</i> Sulim & Desser, 2000	11.0 (9.8-12.2)	8.5 (8.1-9.2)	6.0 (5.2-6.9)	4.8 (4.2-5.4)	2.8 (2.1-3.1)	=	5-7	C		b, e	cartilage of gill arch	<i>Notropis cornatus</i>	Canada	
<i>M. xinanensis</i> Ma & Chen, 1998	10.5 (9.6-11.8)	9.2 (8.8-9.3)	5.0-5.6	5.2 (4.8-5.6)	3.2	=	5-6	A	0.2338 × 0.2004	c	gill, kidneys	<i>Schizothorax meridionalis</i>	China	168
<i>M. xingensis</i> Liu, Wang & Yang, 1982	10.1 (7.1-11.4)	8.4 (7.6-10.3)	6.9 (5.6-7.6)	4.6 (3.8-5.4)	2.8 (2.2-3.3)	≠		B	1.141 × 1.034	c, h	skin, fins	<i>Schizothorax meridionalis</i>	China	164
<i>M. yuanensis</i> n. comb. for <i>Myxosoma yuanensis</i> Ma & Zhao, 1992	11.8 (10.4-12.8)	8.0 (7.2-8.8)	4.8	4.8 (4.7-5.2)	2.8 (2.4-3.0)	=		A	0.11826 × 0.06544	b	kidneys	<i>Schizothorax davidi</i>	China	



<i>M. yibinensis</i> Zhao & Ma, 1994	9.0 (8.5-9.8)	10.9 (10-12)	6.8 (6.8-6.9)	4.8 (4.6-5.0)	3.5 (3.0-4.2)	=	A	4.2-7.9 × 2.3-4.6	c, h	muscle	<i>Cyprinus carpio</i>	China	
<i>M. yini</i> Shulman, 1962	7-8	3-3.5					E			kidneys, spleen under scales	<i>Anur thundersfish</i>	China	288
<i>M. yogendhai</i> (Tripathi, 1952)	9-9.5	7.2	5.0-5.5	2.8-3	1.5	=	B				<i>Cirrhina mrigala</i>	India	66
Landsberg & Lom, 1991													
<i>M. yanensis</i> nom. nov. for <i>Myxosoma barbodes</i> Ma, 1998	8.8 (8.0-9.6)	7.2	5.6	4.6 (4.0-5.2)	2.9 (2.8-3.2)	=	A	0.195-0.227 × 0.162-0.195	c, h	gills	<i>Barbodes daruipani</i>	China	264
<i>M. zaccosis</i> Wu & Li, 1986	10.6 (10.4-11.4)	7.1 (6.2-8.0)	5.3 (5.2-5.6)	5.9 (5.6-6.6)	2.5 (2.4-2.8)	≠	C			urinary bladder	<i>Zacco platypus</i>	China	
<i>M. zhaoi</i> nom. nov. for <i>Myxosoma mapienensis</i> Ma & Zhao, 1998	12.2 (12-12.8)	5.6	5.2 (4.8-5.6)	7.4 (7.2-8.0)		=	A	0.2945 or 0.5726 × 0.4661	c, h	gills	<i>Acrossocheilus yunnanensis</i>	China	265
<i>M. zhenzhenensis</i> nom. nov. for <i>Myxosoma talhuensis</i> Ma, 1993	7.2 (6.8-7.8)	8.1 (7.6-8.4)	5.0 (4.6-5.3)	3.7 (3.0-4.6)	1.9 (1.5-2.3)	=	B	2-3	c	muscles	<i>Hypophthalmichthys molitrix</i>	China	266
<i>M. zillii</i> Sakiti et al., 1991	9.8 (8-11)	7.5 (6-8)		5.1 (4-6)	2.5 (2-3)	=	D		a, b, d	gills	<i>Tilapia zillii</i>	Benin	

Abbreviations: LS, length of the spore; WS, width of the spore; TS, thickness of the spore; LPC, length of the polar capsules; WPC, width of the polar capsules (equal, different, or equal and different); NC, number of coils of the polar filament; IP, intercapsular process (A, non-existent; B, small; C, medium-sized; D, large; E, not reported in the species description or not available in the literature consulted); FC, form of the cysts (a, spherical; b, oval; c, round; d, elongate; e, irregular; f, oblong; g, subcircular; h, elliptical; i, fusiform; j, subspiral; k, variable; l, circular; m, cylindrical; n, pyriform); Rem, remarks. All measurements are in micrometres, except for the cyst size (mm).

## 'Remarks' in Table 1

The following remarks relate to the last column of Table 1. The data on spore and cyst dimensions are given in micrometres and as in the original publication, unless otherwise indicated.

1. The smaller polar capsules are  $4.2 \times 2.5$  and the polar filament forms 3 turns.
2. Also in *Sarotherodon galilaeus* and *Oreochromis niloticus vulcanicus*.
3. The length of the smaller polar capsule is 8.3 (8.6-10.0).
4. The cysts were found only in the connective tissue underlying the integument of the body surface or the lining of the branchial chamber.
5. The cysts are wedged into the cartilaginous branchial arch, such that they are cleaved into two parts. The inner part adheres to the inner surface of the branchial arch, while the outer part is located on its outer surface between the cartilaginous gill-rays that form the axis of two neighbouring gill-filaments. The inner and outer part of the cysts are connected by an isthmus. The dimensions indicated refer to the size of each part of the cyst. The smaller polar capsules are  $2.5-4.4 \times 1.8-3.3$ . Sometimes there are 7 coils in the polar filament within the larger polar capsules; in the smaller ones there are 4 coils (sometimes 3).
6. The smaller polar capsules are  $2.5 (2.0-4.0) \times 1.75 (1.0-2.0)$ .
7. The cysts may be horse-shaped ( $440 \times 218$ ). The smaller polar capsules are  $11.3 (10.1-12.2) \times 2.2 (2.0-2.4)$ , and the polar filament forms 15-18 coils. Within the same plasmodium different spores were found: 18.3 (16.9-19.3) LS, 6.0 (5.6-6.9) WS, 12.6 (10.4-13.7) LPC, 2.8 (2.2-3.1) WPC; the polar filament forms 18-20 coils.
8. In the serosa and connective tissue of the bulbus arteriosus, serosa of the atrium and gill aortae.
9. Also in *Cirrhina mrigala*. One of the specimens of *C. mrigala* was found infected in almost all the organs. The smaller polar capsules are  $4.1 \times 3.1$ .
10. The parasite localises in the cartilage of the head, particularly the gill-arches, occasionally in the base of the largest fin-rays.
11. Also in *Labeo rohita* and *Cirrhina mrigala*.
12. Also in the buccal cavity, jaw bone and crop tissue.
13. Also in the gall-bladder, ovary and fat-bodies.
14. Also in the perioral tissue, pelvic and pectoral fins, and flank of the body near the lateral line.
15. Also in the fins, heart and under the serous membranes surrounding the intestine. The dimensions indicated are of elongate-ellipsoidal spores. A small portion of the spores are oval and measure 10.5 (10.3-10.9) in length and 8.0 (7.2-8.5) in width.
16. Spores  $13.2 \text{ long} \times 6.4 \text{ wide}$  are "fairly common" (sic).
17. Many spores are 17-18 long and 6-6.5 wide. The smaller polar capsules are 6.6-8.9 in length.
18. The smaller polar capsules are  $2.7-3.6 \times 1.8$ .
19. The smaller polar capsules are  $3.7 (3.1-4.0) \times 2.9 (2.5-3.2)$ , and the polar filament forms 3-4 coils.
20. The smaller polar capsules are  $6-6.5 \times 3-3.5$ , and the polar filament forms 4-5 coils.

21. Also in *Gadopsis bispinosus*. Also in the muscles, retrobulbar connective tissue, hepatic hilus, intestinal serosa, and adjacent mesenteries, meninx and loose connective tissues adjacent the cranial cartilages.
22. The polar capsules are spherical and 3.8 (3–5) in diameter.
23. The smaller polar capsules are 2.4 (2.2–3.0) × 1.5 (1.3–2.0).
24. The smaller polar capsules are 4.2 (1.7–6.6) × 2.2 (1.7–4.1).
25. The cyst dimensions and form refer to cysts in the connective tissue covering the gill arches. In the extremity of the gill lamellae the cysts are elongate and c.1.5 mm long.
26. Also in the suprabranchial respiratory organ, heart and urinary bladder. The dimensions indicated refer to the “long form” of spores. The “short form” of spores has 6–8 coils of the polar filament and the dimensions LS 8.5 (7.4–9.2), WS 6.6 (6.0–8.0), TS 4.9 (4.4–5.3), LPC 3.6 (3.1–4.1) and WPC 2.3 (2.0–3.0).
27. Also in *Tilapia variabilis*, *T. nilotica* and *Tilapia* sp. The spores were described as highly variable in shape (ovoid, ellipsoidal, pyriform, round). The measurements indicated refer to type 1 spores. The type 2 spores are LS 11.6 (9.0–15.0), WS 8.0 (6.5–10.5), LPC 4.7 (3.0–7.0) and WPC 2.1 (1.5–3.0). The type 3 spores are LS 12.5 (10.0–14.5), WS 7.2 (6.3–8.0), LPC 7.5 (5.5–9.5) and WPC 2.3 (1.8–3.0).
28. The smaller polar capsules are 3.3 (2.5–4.0) × 1.4 (1.0–2.5).
29. The smaller polar capsules are 4.8 (3.9–5.5) in length.
30. The smaller polar capsules are 5.2 (5.0–6.4) in length.
31. The longer polar capsule is pyriform and the smaller one is more or less spherical. The smaller polar capsule is 1.8 × 1.0.
32. Also in *Barbus sharpeyi* and *B. grypus*. The smaller polar capsule is 7.0 (6.6–7.2) long, and the polar filament forms 6 coils.
33. Also in *Oreochromis aureus* × *O. niloticus* and *O. niloticus vulcanicus*. The values indicated refer to the hybrid host. Values for *S. galilaeus*: LS 12.9 (12.1–14.0), WS 9.4 (8.0–9.9), TS 6.9 (6.3–7.4), LPC 7.8 (7.1–8.6), WPC 3.6 (3.2–4.0).
34. The dimensions indicated correspond to globular plasmodia. Ellipsoidal plasmodia are 400–600 × 250–350.
35. The smaller polar capsules are 2.0 (1.4–2.1) × 1.2 (0.7–1.4).
36. Also in the connective tissue of muscles in the head. The polar capsules are sometimes slightly different in size. The polar filament can (rarely) have 6–9 coils.
37. The smaller polar capsules are 6.0 (4.9–8.1) × 2.0 (1.6–2.4).
38. The smaller polar capsules are 5.4 (4.2–7.0) × 3.4 (3.1–3.5) and the polar filament forms 5–6 coils.
39. The values indicated are for spores with equal-sized polar capsules. The spores with unequal polar capsules have 7–9 coils in the polar filament. The larger polar capsules are 11.6 (8.0–13.0) × 1.3 (1.2–1.8) and the smaller ones are 9.9 (8.0–13.0) × 1.2 (1.0–1.8).
40. The smaller polar capsules are 3.1 × 2.1.
41. The spores are spherical and are 4.8–5.2 in diameter.
42. The smaller polar capsules are 4.0 (3.5–4.2) × 1.3 (1.4–1.8) and the polar filament forms 3–4 coils.
43. Also in *Etheostomum nigrum*. Some of the plasmodia were partly exposed on the dorsal surface of tectum, some were within the cortex and some were in tracts beneath the cortex, while some of the larger plasmodia protruded from the tracts into the optic ventricles.
44. The same authors described *Myxosoma notropis* from the host *Notropis cornutus*. According to Landsberg & Lom (1991), it is likely both forms correspond to the same species. The spores of this species were 13.3–16.6 long and 6.4–11 wide. The polar capsules were equal or subequal, being 4–6.4 × 1.8–3.2.
45. Within the same plasmodia different spores were found: LS 7.4 (6.3–8.1), WS 5.8 (5.1–6.2), LPC 3.9 (3.2–4.2), WPC 2.2 (2.0–3.0) (the larger), 3.4 (2.5–4.0) LPC and 2.2 WPC (1.9–2.8) (the smaller); both different polar capsules have 4–5 coils in the polar filament.
46. The smaller polar capsules are 6.9–8.5 × 1.2–2.0.
47. The smaller polar capsules open laterally, and are 2.6 (2.1–3.6) × 2.5 (1.4–2.9).
48. Some spores are 12 long and 11 wide, and have polar capsules 4–6 long.
49. Exceptionally the polar capsules are up to 7.3 in length.
50. The smaller polar capsules are 6.3 (5.7–7.4) × 4.8 (4.2–5.5) and the polar filament forms 7–11 coils.
51. Also in the connective tissue of the pharynx and integument. The smaller polar capsules are 6.6 (5.5–7.0) × 1.9 (1.5–2.0).
52. The smaller polar capsules are 3.1 (2.9–5.0) × 1.6 (1.1–2.1).
53. Many spores are 5.5–6.4 wide. The polar capsules are sometimes unequal.
54. The smaller polar capsules are 3.5 (2.9–4.3) × 2.5 (2.1–3.0).
55. The cyst was found in the skin covering the suboperculum, another between the maxilla and the eye, and a third immediately behind the eye.
56. The smaller polar capsules are 1.5 × 1.0.
57. Also in *Sarotherodon galilaeus* and *Oreochromis niloticus vulcanicus*.
58. Also in *Percina caproides*. The length of the polar capsules refer to the shorter polar capsules. The spherical cysts are small and the irregular ones are larger.
59. The smaller polar capsules are 7.9 (7.6–8.1) × 5.2 (4.6–5.4).
60. The spore length and width refer to short ellipsoidal spores. The longer ellipsoidal spores are 9.9 (9.5–10.2) in length.
61. Also in *Oncorhynchus keta* and *O. kisutch*.
62. In the ventral muscles of the pelvic fin and right side of the abdomen.
63. The smaller polar capsules are 4.5–5.5 × 3–3.5 and the polar filament forms 6–7 coils. In the larger polar capsules the polar filament sometimes forms 7 coils.
64. Within the fibrous connective tissue capsule surrounding metacercariae of the trematode *Uvulifer ambloplitis*. Li & Desser (1985) described *Myxobolus gibbosus* from *Lepomis gibbosus*, a homonym of *M. gibbosus* Herrick, 1941 from the same host. Realising the duplication of names, Desser (1993) established *M. lii* to replace *M. gibbosus* Li & Desser, 1985. However, Landsberg & Lom (1991) had previously synonymised *M. gibbosus* Li & Desser, 1985 with *M. uvuliferus* Cone & Anderson, 1977. Thus, *M. lii* Desser, 1993 falls into synonymy with *M. uvuliferus* (quoted from Cone & Raesly, 1995).
65. The smaller polar capsules are 3.9 (3.0–5.0) × 2.6 (2.0–3.0).
66. The polar capsules are spherical and are 2.8–3.6 in diameter.

67. Also in *Notemigonus crysoleucas*.
68. The smaller polar capsules are  $5.7 (4.9-6.3) \times 3.3 (3.0-4.0)$ .
69. Also in the gall-bladder; less frequently in the gills, gonads, intestine, muscle, swim-bladder, heart and peritoneum. The polar capsules are frequently different in size.
70. Also in *Leuciscus cephalus cabeda* and *Rutilus rutilus*.
71. The smaller polar capsules are  $8-11.5 \times 2-3$ .
72. Also in the liver and pancreas.
73. The authors noted that the polar capsules are somewhat unequal in size.
74. The polar capsules are slightly unequal in size in most cases.
75. Fujita (1929) described *Lentospora anguilli* from *Anguilla japonica*. Later, Landsberg & Lom (1991) synonymised the two genera, creating the secondary homonym *Myxobolus anguilli* (pre-occupied by *M. anguilli* Wu, 1977). The polar capsules are 5 in diameter. The cysts are knob-shaped.
76. Also in the connective tissue of most of the viscera, the fatty tissue of the dorsal surface of the brain, kidneys and other organs. The muscle tissue is apparently the only type of tissue free from invasion. One polar capsule is usually about  $0.7-1 \mu\text{m}$  larger than the other.
77. Also in the gills, cartilage of gill-arch, glomeruli of the kidney and tissues of the urinary and gall-bladder.
78. The cysts were found immediately anterior to the bases of the branchiostegal rays and in the subcutaneous connective tissue underlying the ventral surface epithelium of the host. The smaller polar capsules are  $4.3 (3.3-4.9) \times 2.4 (1.6-2.8)$ .
79. The smaller cysts are  $150 \times 125 \times 35$ .
80. The smaller polar capsules are  $2.1 (2-3) \times 1.5 (1-2)$ .
81. The dimensions indicated refer to spores with equal-sized polar capsules. For spores with differently sized polar capsules, the larger is  $4.9 (4.5-5.0) \times 2.5 (2-3)$  and the smaller is  $3.9 (3-4) \times 2.4 (2-3)$ .
82. Also in the muscularis of the intestine, from the small intestine down to the rectum.
83. Only exceptionally is there a small triangular process.
84. Solitary spores were found in the melano-macrophage centres of the kidney. Other plasmodia had a globule to ellipsoidal shape and measured  $500-700 \times 700-1000$ .
85. The smaller polar capsules are  $2.6 (2.5-3.3) \times 1.8 (1.7-2.5)$ .
86. The smaller spores were found consistently within the same plasmodia. Their dimensions are LS  $8.3 (7.0-9.5)$ , WS  $4.0 (3.5-5.0)$ , LPC  $5.8 (5.0-7.5)$  and WPC  $1.5 (1.0-2.0)$ .
87. This name is pre-occupied by *M. mugilis* Haldar et al., 1996. The smaller polar capsules are  $2.4 \times 1.2$ , and the polar filament forms 5-6 coils.
88. The smaller polar capsules are  $4.5 \times 1.8$ .
89. The cysts are sausage- or rod-shaped.
90. The cysts appear as cystic masses.
91. The cysts are spindle-shaped.
92. The cysts are branch-like.
93. The smaller polar capsules are  $5.3 (4.1-6.5) \times 3.5 (3.0-4.0)$  and the polar filament forms 6-7 coils.
94. The smaller polar capsules are  $4.0 \times 2.2$  and the polar filament forms 3 coils.
95. Three types of cysts were found: ovoid, elongate ( $230-750 \times 109-295$ ) in the gill adductor muscle parallel to the axis of the gill filament; large cysts visible to the naked eye, again in the gill adductor muscle and separating gill-filaments considerably. The anterior extremity was rounded and very broad (180-850), the base narrowed (30-130) and the total length varied from 290 to 950; rounded cysts (diameter 1.5 mm) in the integument visible to the naked eye (these were observed once in a 3 cm long fry).
96. Also in the superficial mandibular muscles, muscles of the operculum and pharyngeal wall, and connective tissue covering the gill-arches.
97. Also in *Barbus guirali* and *B. martorelli*.
98. Also in the gill adductor muscle, muscles of the operculum, the bile duct and the gall-bladder wall. One polar capsule is placed more anteriorly than the other.
99. The smaller polar capsules are  $4.9 (4.3-5.0) \times 2.9 (2.5-3.6)$ .
100. Also in *Hemichromis fasciatus* and *Tilapia hybride* (sic). The smaller polar capsules are  $4.3 (3-5.5) \times 3.1 (2-3.5)$  and the polar filament forms 5-6 coils.
101. In the fat tissue at the extremity of the gill-arches and in the adductor muscles of the primary gill filaments. In the muscles, the cysts are oval or fusiform and measure  $50 \times 85-160$ ; in the fat tissue the cysts are spherical, oval, sometimes irregular and measure  $80 \times 200-150 \times 800$ .
102. The smaller polar capsules are 1-2 in length, rudimentary and apparently non-functional.
103. About 25% of the spores have unequal polar capsules.
104. The smaller polar capsules are  $7.2-8.8 \times 2.8-3.2$ , and the polar filament forms 5-6 coils.
105. Also in the pericardium. Also in *Barbus camptacanthus*, *B. guirali* and *B. martorelli*. The smaller polar capsules are  $3.9 (2.2-5.0) \times 2.0 (1.5-2.5)$  and the polar filament forms 3 coils.
106. The smaller polar capsules are  $4.0 (3.0-4.5) \times 2.3 (1.8-2.5)$  and the polar filament forms 3-5 coils.
107. The polar capsules are pyriform, with long necks, and converge into a common terminal duct into which both polar capsules open.
108. The cysts had two forms and occupied two different sites in the gill-filaments. The first plasmodial form was tear-shaped and at the distal tip of the infected filament; it measured 960 (750-1180) in length and 330 (250-380) in width. The second form of plasmodia was rod-like, lying to one side of the gill-filament and measured 1410 (400-2400)  $\times$  350 (200-500).
109. The smaller polar capsules are  $6.6 (5.8-7.5) \times 3.6 (3.3-4.1)$  and the polar filament forms 7-8 coils.
110. Also in *Sarotherodon galilaeus* and *Oreochromis niloticus*.
111. *M. catostomi* Kudo, 1923, originally described as *Myxosoma* from *C. commersonii* from the United States, is considered by Landsberg & Lom (1991) identical to *M. catostomi* Fantham, Porter & Richardson, 1939. The figures indicated were reported by these authors. Grinham & Cone (1990) renamed the species as *Myxobolus musculosus*.
112. Also in melano-macrophage centres of the kidney and spleen.
113. The smaller polar capsules are  $4.5 (4.4-5) \times 3.2 (2.2-4.4)$  and the polar filament forms 6-7 coils.

114. In the spores with unequal polar capsules, they were  $3.5 (3-4) \times 2.5 (2-3)$  or  $2.9 (2.5-3.5) \times 2.5 (2-3)$ .
115. There is only one polar capsule.
116. The smaller polar capsules are  $2.6-4.3 \times 1.4-1.7$ .
117. Also in *Pimelodus claria*. In the intestine of *P. piraia* and cloaca of *P. claria*.
118. Also in *Hemiculer leucisculus*.
119. Also in *Channa argus*.
120. Also in *Cyprinus carpio*.
121. Also in *Carassius auratus auratus*.
122. Also in *Carassius auratus auratus*.
123. Also in *Carassius auratus*.
124. Also in the kidney of *Cyprinus carpio* and *Carassius auratus auratus*.
125. Also in *Cirrhinus molitorella*.
126. Also in *Pelteobagrus fulvidraco*.
127. Also in *Cyprinus carpio*.
128. Also in the gills of *Ctenopharyngodon idellus* and intestine of *Carassius auratus auratus*.
129. Also in the kidney, gall-bladder, skin mucus and gills of *Carassius auratus auratus*.
130. Also in the gills and kidney of *Abbottina rivularis*, in the kidney of *Acrossocheilus yunnanensis* and in the intestine of *Saurogobio dumerili*.
131. Also in the skin, spleen and kidney of *Rhodeus sinensis*, in almost all the organs of *Ctenopharyngodon idellus* and in the gills of *Opsariichthys bidens*, *Variorhinus angustistomatus*, *Pseudolaubuca sinensis*, *Schizothorax davidi* and *Cyprinus carpio*.
132. The smaller polar capsules are  $3.9 (3.6-4.2) \times 2.1 (1.8-2.4)$ . Also in the kidney of *Hypophthalmichthys molitrix*, *Sarcocheilichthys sinensis sinensis*, *Acheilognathus chankaensis*, *A. macropterus*, *A. hypselonotus* and *Paracanthobrama guichenoti*, and in almost all the organs of *Rhodeus sinensis*.
133. The smaller polar capsules are  $2.8 (2.2-3.4) \times 1.3 (0.9-1.4)$ . Also in the intestine and gills of *Cyprinus carpio* and in the gills of *Carassius auratus auratus*.
134. The smaller polar capsules are  $5.9 (4.8-6.0) \times 2.6 (2.2-3.0)$ . Also in the heart, urinary bladder and skin of *Cyprinus carpio* and almost all the organs of *Megalobrama terminalis*.
135. The smaller polar capsules are  $2.6 (2.4-3.0) \times 1.2 (1.0-1.4)$ . Also in *Cyprinus carpio* and *Carassius auratus auratus*.
136. The smaller polar capsules are  $5.8 (5.2-6.0) \times 3.4 (3.1-3.6)$ . Also found in the kidney, nasal cavity and gall-bladder.
137. The smaller polar capsules are  $3.0 (2.4-3.6) \times 3.0 (1.4-2.6)$ . Also in the kidney and spleen of *Ctenopharyngodon idellus* and *Sarcocheilichthys parvus*.
138. The smaller polar capsules are  $3.6 (3.0-4.8) \times 1.8 (1.6-2.2)$ . Also in *Hypophthalmichthys molitrix*.
139. The smaller polar capsules are  $3.7 (3.4-4.2) \times 2.5 (2.4-3.2)$  and the polar filament forms 4-5 coils. Also in *Hypophthalmichthys molitrix* and *Cyprinus carpio*.
140. Also in *Carassius auratus auratus*.
141. Also in the urinary bladder, gall-bladder and intestine. The smaller polar capsules are  $4.5 (3.6-5.4) \times 2.0 (1.8-2.4)$  and the polar filament forms 3-4 coils.
142. Also in *Carassius auratus auratus*. The smaller polar capsules are  $4.9 (4.6-5.4) \times 2.9 (2.6-3.1)$ .
143. Also in *Channa maculata*. The smaller polar capsules are  $3.6 (3.4-4.2) \times 1.9 (1.6-2.2)$ .
144. Also in *Acheilognathus macropterus* and *Rhodeus ocellatus*. The smaller polar capsules are  $3.2 (3.0-3.6) \times 2.0 (1.8-3.6)$ .
145. Also in the intestine, liver and heart. The smaller polar capsules are  $5.5 (4.2-6.0) \times 2.7 (2.4-3.2)$  and the polar filament forms 4-5 coils.
146. Also in the gills, urinary bladder, spleen and intestine of *Aristichthys nobilis*, and in the spleen of *Carassius auratus auratus*. The smaller polar capsules are  $4.8 (3.8-5.4) \times 2.8 (2.4-3.4)$ .
147. Also in the spleen of *Ctenopharyngodon idellus*. The smaller polar capsules are  $3.3 (3.0-3.6) \times 3.1 (2.8-3.4)$  and the polar filament forms 3-4 coils.
148. Also in *Hypophthalmichthys molitrix*.
149. Also in *Anguilla japonica*.
150. Also in the urinary bladder. Also in *Cyprinus carpio haematopterus*.
151. Also in the urinary bladder of *Schizothorax davidi* and in the spleen of *Aristichthys nobilis*. The smaller polar capsules are  $5.0 (4.6-6.4) \times 3.3 (3.1-4.0)$ .
152. Also in the gills of *Hypophthalmichthys molitrix*. The smaller polar capsules are  $4.3 (3.0-5.4) \times 2.2 (1.8-3.0)$ , and the polar filament forms 4-5 coils.
153. Also in the gills of *Aristichthys nobilis*. The smaller polar capsules are  $3.4 (3.0-3.6) \times 2.5 (2.4-2.6)$ , and the polar filament forms 3-4 coils.
154. Also in the swim-bladder, intestine, kidney, skin and urinary bladder.
155. Also in *Zaco platypus*, in the gills and kidney of *Abbottina rivularis*, *Rhodeus ocellatus* and *Pseudorasbora parva*, and in the gills and nasal cavity of *Distoichodon tumirostris*, *Xenocypris microlepis* and *Toxabramis swinhonis*.
156. Also in *Abbottina kiangtingensis*.
157. Also in the liver, spleen, kidney and urinary bladder of *Schizothorax davidi*. The smaller polar capsules are  $3.3 (3.2-3.6) \times 1.3 (1.2-1.3)$ .
158. Also in *Aristichthys nobilis*. The smaller polar capsules are  $3.7 (3.2-4.5) \times 2.3 (2.2-2.5)$ , and the polar filament forms 5 coils.
159. Also in *Acheilognathus chankaensis*.
160. Also in the gills and kidney of *Lateolabrax japonica* and in almost all the organs of *Carassius auratus auratus*. The smaller polar capsules are  $2.8 (2.4-3.0) \times 1.6 (1.2-1.8)$ .
161. Also in the gills, kidney, gall-bladder, muscles, urinary bladder and liver of *Carassius auratus auratus*, in the gills and kidney of *Silurus solsatoris*, and in the gills of *S. asotus* and *Spinibarbus sinensis*.
162. Also in *Gymnocypris przewalskii przewalskii*.
163. In *Gymnocypris przewalskii przewalskii*.
164. In *Gymnocypris przewalskii przewalskii*.
165. Also in *Cyprinus carpio*.
166. Also in *Hypophthalmichthys molitrix*.
167. In *Sarcocheilichthys nigripinnis davidi*.
168. Also in *Triplophysa strauchii*.
169. Name pre-occupied by *M. ovatus* Kudo, 1934. Also in *Mylopharyngodon piceus*.

170. Also in the muscles of the abdominal cavity wall, oral cavity and ureter. The smaller polar capsules are  $5.45 (4.8-5.8) \times 3.0 (2.4-3.2)$ .
171. Also in the urinary bladder, ureter and ovary. The smaller polar capsules are  $4.0 (3.8-4.3) \times 2.2 (1.2-2.4)$ .
172. Also in the urinary bladder of *Carassius auratus auratus*.
173. Also in *Cyprinus carpio haematopterus*.
174. Some spores measure 9 in both length and breadth. The polar capsules are sometimes very slightly asymmetrical. The figure provided refers to the large polar capsule.
175. The smaller polar capsules are  $5.4-6.8 \times 2.7-3$ .
176. The smaller polar capsules are  $6-6.5 \times 3.2-3.5$ .
177. The smaller polar capsules are  $2.5-4 \times 1.3-1.5$ .
178. Also in *Nemacheilus* sp.
179. The smaller polar capsules are  $3.7 \times 2.5$ . Also in *Tinca tinca* and *Chondrostoma nasus*.
180. Also in *Leuciscus cephalus*.
181. Also in other cyprinids. The smaller polar capsules are  $3.9-5 \times 2.7-3$ .
182. Also in *Hypophthalmichthys molitrix*.
183. The smaller polar capsules are  $2.4 \times 0.2-0.9$ .
184. The smaller polar capsules are  $4.6 (4.1-4.8) \times 2.8 (2.5-3.1)$  and the polar filament forms 4–5 coils.
185. The smaller polar capsules are 1.5 in width.
186. *Myxobolus okobojiensis* Otto & Jahn, 1943 was described from *Pomoxis sparioides* and *Myxosoma okobojiensis* Rice & John, 1943 from *Ictiobus bubalis*. When the two genera were synonymised a homonym was created. Grinham & Cone (1990) established a new species, *Myxobolus filamentus* Grinham & Cone, 1990 for *Myxosoma okobojiensis*. Almost at the same time, Landsberg & Lom (1991) erected *Myxobolus jahnricei* for the same taxon. *M. jahnricei* Landsberg & Lom, 1991 thus falls in synonymy with *M. filamentus* Grinham & Cone, 1990 (quoted from Cone & Raesly, 1995).
187. The transfer of *Myxosoma rotundum* Meglitsch, 1937 to *Myxobolus* resulted in the combination *Myxobolus rotundus* (Meglitsch, 1937), but this is a secondary homonym of *M. rotundus* Nemeček, 1911. Grinham & Cone (1990) erected the new name *M. meglitschi* to avoid the homonymy, as did Landsberg & Lom (1991). The correct name for this species is, therefore, *Myxobolus meglitschi* Grinham & Cone, 1990 (quoted from Cone & Raesly, 1995).
188. The polar capsules can also be  $6.5-7 \times 3.8-4.2$  and  $5.3-5.6 \times 3-3.5$ .
189. The smaller polar capsules are  $5.5-7.2 \times 3-3.5$ .
190. Also in *Alburnoides bipunctatus eichwaldi* and *Varicorhinus heratensis steindachneri*. The smaller polar capsules are  $3-5 \times 3-5$ .
191. The smaller polar capsules are 4.5–6 long.
192. The smaller polar capsules are  $3.5-4 \times 2-2.5$ .
193. The smaller polar capsules are  $3 \times 2-2.5$ .
194. The smaller polar capsules are  $3.7-4 \times 2.6$ .
195. The smaller polar capsules are  $5.7-6 \times 3.6-4.1$ .
196. Also in *Oncorhynchus nerka*.
197. The smaller polar capsules are  $6.8-8.7 \times 4.4-4.6$ .
198. The smaller polar capsules are  $3-4 \times 2.5-3$ .
199. Also in *Paracheilognathus imberbis*. The smaller polar capsules are 4.2 long.
200. The smaller polar capsules are  $3 \times 1.2$ .
201. Also in *Parasilurus asotus*.
202. Also in the gills of *Hypophthalmichthys molitrix* and in the skin of *Cirrhinus molitorella*.
203. Also in the gills and kidney of *Aristichthys nobilis*, *Sarcocheilichthys nigripinnis nigripinnis*, *Acrossocheilus hemispinus hemispinus*, *Rhodeus sinensis*, *Carassius auratus auratus* and *Ctenopharyngodon idellus*, in the kidney and urinary bladder of *Garra pingi pingi*, and in the kidney of *Pseudorasborsa parva*.
204. Also in the gills of *Hypophthalmichthys molitrix*, *Leiocassis braschnikowi* and *Opsariichthys bidens*.
205. Also in the gills of *Acrossocheilus parallens* and the kidney of *Leiocassis crassilabris* and *Channa maculata*.
206. In almost all the organs. Also in *Aristichthys nobilis*.
207. Also in *Cyprinus carpio haematopterus*. The smaller polar capsules are  $3.2-4.2 \times 2.1-2.6$ .
208. Also in seven other cyprinids.
209. Also in other cyprinids.
210. The figures for the polar capsules refer to the larger ones (no figures are indicated for the smaller). Also in 'many goby fishes'.
211. Also in *Rutilus rutilus heckeli* and *Scardinius erythrophthalmus*.
212. Also in *Leuciscus cephalus orientalis*.
213. The host is *Varicorhinus heratensis steindachneri*. The smaller polar capsules are  $1.2-1.3 \times 1.2-1.8$ .
214. Also in *Gobio gobio*.
215. Also below the dorsal fin. The smaller polar capsules are  $4.8 \times 2.4$ .
216. Name pre-occupied by *M. sinensis* Chen & Hsieh, 1960. Also found in the gills, kidney and fins of *Carassius auratus auratus*, the gills of *Xenocypris yunnanensis* and the kidney of *Anguilla japonica* and *Spinibarbus sinensis*.
217. Name pre-occupied by *M. omeiensis* Ma & Zhao, 1993. Also found in the gills of *Schizothorax prenanti* and *S. meridionalis*.
218. Within the same plasmodia different spores were found: LS 11.5 (10.6–12.5), WS 5.7 (4.8–6.3), LPC 6.1 (5.8–6.5), WPC 2.1 (2.0–2.5) (the larger polar capsules, having 5–6 coils in the polar filament), or LPC 5.2 (4.5–5.9) and WPC 2.0 (1.9–2.1), with 4–5 coils in the polar filament.
219. In the Danube and Dnieper River basins. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
220. In the walls of the intestine, mesentery, liver, kidney, spleen and muscles of *Cyprinus carpio*, *C. carpio haematopterus*, *Rutilus rutilus*, *Leuciscus lehmanni*, *Tinca tinca*, *Abramis brama*, *Rostrogobius amurensis* and *Gobio albipinnatus tenuicarpus*. In the basins of rivers emptying into Caspian and Black Seas and the Amur River basin. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
221. Also in the spleen and muscles of *Rutilus rutilus*.
222. Also in the wall of the stomach and pyloric caecae, spleen and kidney of *Mugil chelo* and *M. capito*.
223. The cysts are lenticular.
224. Name pre-occupied by *M. variabilis* Jaczó, 1940. The smaller polar capsules are  $8.6 (6.5-11.4) \times 2.2 (1.6-3.2)$ . The figures refer to spores from the gills. Those in the muscles are LS 13.1 (11.0–16.3), WS 6.9 (4.9–8.1), LPC 6.3 (6.5–9.8) and WPC 2.6 (1.6–3.2). In the connective tissue of the gill-filaments and subcutaneous tissue in the

- head of Amur wild carp, spiny bitterling and whiskered chub. In Amur River basin.
225. In gills, operculum, skin, mesenteries, wall of gall bladder, intestine, urinary bladder, liver, kidneys and gonads of a great number of hosts from rivers emptying into Baltic, Barents, White, Black, Azov and Aral Seas, etc. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
226. In *Perca fluviatilis*, *Leuciscus waleckii*, *Scardinius eryththalmus* and *Phoxinus phoxinus manschuricus* of River Preguel and basins of the Dniester, Dnieper, Yenisei and Amur Rivers. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
227. Also in the intestine, ovary and other organs of barbel, Dnieper barbel and big-headed barbel from the Neman, Danube, Dnieper and Arak River basins. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
228. The smaller polar capsules are  $7.5 (6.5-11.4) \times 2.5 (1.6-3.4)$ .
229. In *Cyprinus carpio haematopterus* and the old world minnow from the Danube, Dnieper and Amur River basins and the upper reaches of the Amur-Darya River. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
230. Name pre-occupied by *M. orbiculatus* Kudo, 1920.
231. The smaller polar capsules are  $4.7-6.6 \times 2.4-3.8$ .
232. The smaller polar capsules are  $2.2-3.3 \times 1.1-2.5$ .
233. The smaller polar capsules are  $4.5-6.2 \times 2.1-3$ .
234. Name pre-occupied by *M. variabilis* Jaczó, 1940. The smaller polar capsules are  $3.2-3.6 \times 2.1-2.7$ .
235. The smaller polar capsules are  $3.3-4.1 \times 1.7-2.2$ .
236. The smaller polar capsules are  $3-3.2$  wide.
237. The smaller polar capsules are  $4.8-7 \times 2-3$ .
238. The smaller polar capsules are  $4.3-5.5 \times 2-4$ .
239. The smaller polar capsules are  $4-5.8 \times 2.3-3.3$ .
240. Also in *Carassius auratus gibelio*.
241. Landsberg & Lom (1991) proposed the same name.
242. Some spores can be  $8.5-10$  long  $\times$   $6.5$  wide.
243. The smaller polar capsules are  $4.2-3.5 \times 2.5-3$ .
244. The cysts on the internal face of the operculum are  $3.5$  mm in diameter. The smaller polar capsules are  $5.1 \times 2.1$ .
245. Also in *Perca fluviatilis*.
246. Also in *Plectorhynchus mediterraneus*.
247. Name pre-occupied by *M. kiangsuensis* Ma, 1992.
248. Name pre-occupied by *M. intestinalis* Kudo, 1920.
249. Name pre-occupied by *M. ellipticus* (Fujita, 1924) Landsberg & Lom, 1991.
250. Name pre-occupied by *M. barbi* Tripathi, 1952. Also in *Barbus guirali*, *B. jae* and *B. mortorelli*.
251. Name pre-occupied by *M. abbotinae* Ma et al., 1982.
252. Name pre-occupied by *M. capoeta* Chen in Chen & Ma, 1998.
253. Name pre-occupied by *M. obovoides* Nie & Lie, 1973.
254. Name pre-occupied by *M. clarii* Chakravarty, 1943.
255. Name pre-occupied by *M. schizothoraxi* Ma, 1998. Also in *Schizothorax wangchiachii* and *S. meridionalis*.
256. The smaller polar capsules are  $1.7-2.2$  long.
257. The smaller polar capsules are  $4.4 \times 2.7$ .
258. Name pre-occupied by *M. rasborae* Chen in Chen & Ma, 1998.
259. Name pre-occupied by *M. sinkiangensis* Chen in Chen & Ma, 1998.
260. Name pre-occupied by *M. pyryformis* Ma, 1998.
261. Name pre-occupied by *M. liaosensis* Ma, 1998.
262. Name pre-occupied by *M. cheni* Shulman, 1962.
263. Name pre-occupied by *M. tunghuensis* Chen in Chen & Ma, 1998.
264. Name pre-occupied by *M. barbodesi* Ma, 1998.
265. Name pre-occupied by *M. mapienensis* Ma, 1998.
266. Name pre-occupied by *M. taihuensis* Ma, 1993.
267. Also in the wall of the stomach, pyloric caeca, intestine and gall-bladder.
268. Name pre-occupied by *M. acrosssocheilusi* Ma & Zhao, 1992.
269. Name pre-occupied by *M. yaanensis* Ma & Zhao, 1992.
270. Name pre-occupied by *M. synodonti* Fomena et al., 1985.
271. Name pre-occupied by *M. chengkiangensis* Ma, 1998.
272. Name pre-occupied by *M. hainanensis* Chen in Chen & Ma, 1998.
273. Under the dermis of the inner surface of the gill-arch.
274. Also in *Cyprinus carpio*.
275. Name pre-occupied by *M. carassii* Klokacheva, 1914.
276. Name pre-occupied by *M. chungnanensis* Chen in Chen & Ma, 1998.
277. Name pre-occupied by *M. sinkiangensis* Chen in Chen & Ma, 1998.
278. Also in *Notemigonus crysoleucas*.
279. The length of the smaller polar capsule is  $15.4 (13.5-16.9)$ .
280. The cysts are reniform.
281. Also in *Barbus sharpeyi*.
282. The smaller polar capsules are  $3.0 (2.9-3.2) \times 2.1 (2.0-3.2)$  and the polar filament forms 3-4 coils.
283. Also in *Barbus sharpeyi*. The smaller polar capsules are  $4.8 (4.5-5.1)$  in length, and the polar filament forms 6-7 coils.
284. Name pre-occupied by *M. anguilli* Wu, 1977.
285. Name pre-occupied by *M. garrae* Ma, Dong & Wang, 1982.
286. Name pre-occupied by *M. gnathopogonae* (Inoue & Hoshina, 1983) Landsberg & Lom, 1991.
287. Name pre-occupied by *M. obliquus* Kudo, 1934.
288. Data taken from Bykhovskaya-Pavlovskaya et al., 1962.
289. Data taken from Shulman, 1984.
290. Also in *Rutilus rutilus* and *Abramis brama*.
291. The smaller polar capsules are  $2.4 (2-3) \times 1.8 (1.5-2)$  and the polar filament forms, apparently, 3 coils. The round or oval plasmodia are 80-120 to 200-400.
292. The smaller polar capsules are  $3.2 (2.5-3.8) \times 1.8 (1.3-2)$  and the polar filament forms 4-5 coils.

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