

AMAZONIANA	VI	4	521 – 528	Kiel, Januar 1979
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## Additions and corrections to the Brokopondo study (Surinam)

by

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In the "Studies on the Fauna of Suriname and other Guyanas", Vol. XV, 1975, the results are given of the hydrobiological observations in Surinam with special reference to the man-made Brokopondo Lake in 1964. In this study no special interest was given to taxonomic problems, as the aim was to investigate the general ecological alterations in the environment before and after the closing of the hydroelectric dam in the Suriname river. The identification of species was especially difficult as only a few studies were available about this unknown region. Samples of collected animals and plants were sent to several specialists as is indicated on pg. 5 of the study. The results of the identifications were not included in the publications. As far as available these data will be given here, together with some corrections. The data are summarized and for orientation to the locations mentioned below, the author refers to maps in the study (LEENTVAAR 1975).

### SPONGES (det. Dr. A.A. Bonetto, Santa Fe, Argentina)

The colonies of sponges were not abundant in the rivers. They form flat crusts on rocks. A sample from the Suriname river (Saidagoesoela, 17-1-1964) and from the Saracca river (Awarradam, 4-4-1964) was sent to Dr. Bonetto. He stated that the sponges belonged to two species of the genus *Parmula* and to *Ephydatia crateriformis* (Potts).

A sample of a buoy near the dam in the Suriname river, collected 3-12-1963 was identified by Inés Ezcurra de Drago, Argentina, as *Drulia uruguayensis* Bonetto & Ezcurra de Drago, 1969, as published recently in her paper: Freshwater Sponges of Suriname, "Studies on the fauna of Suriname and other Guyanas", Vol. XV, pg. 175-183, 1975. For details see her paper.

### BRYOZOA (det. Dr. F. Wiebach, Plön, GFR)

Only flottoblasts and zoids of Bryozoa in samples of plankton were collected. They appeared to belong to *Plumatella* sp. and *Hislopia* sp.

CRUSTACEA (det. Dr. L.B. Holthuis, Leiden, Holland)

Suriname river, Mamadam, 18-8-1964	<i>Potamocarcinus latifrons</i> (Randall) 1 juv.
pond near Afobaka dam, 17-11-1963	<i>Palaemonetes carteri</i> Gordon 4x
Suriname river, Leonsberg, 27-12-1963	<i>Callinectes bocourti</i> A. Milne Edwards 1 juv.
Suriname river, Mamadam, 25-12-1963	<i>Macrobrachium</i> sp. 2 juv.
Suriname river, Aloesoebanja, 31-1-1964	<i>Macrobrachium olfersii</i> (Wiegmann) 2x
Tibiti river at Sabana, 25-1-1964	<i>Palaemonetes carteri</i> (Gordon) 5x
Tibiti river at Sabana, 25-1-1964	<i>Macrobrachium jelskii</i> (Miers) 1x
Grankreek (Suriname river), 30-7-1964	<i>Macrobrachium? olfersii</i> (Wiegmann) 2 juv.
Kassiekreek (Suriname river) near	<i>Trichodactylus?</i> juv. 15x
Pokigron, 20-3-1964	<i>Livoneca symmetrica</i> Van Name?
	juv. 1x, (Isopoda)

MOLLUSCA (det. Dr. D.C. Geyskes, Leiden and L.J.M. Butot, Leersum, Holland)

Lamellibranchiata.

Suriname river, March 1964	<i>Diplodon granosus</i> Brug.
After closure of the dam numerous	<i>Diplodon voltzi</i> Vernhout
<i>D. voltzi</i> could be collected.	<i>Castalia ambigua</i> Lam.

Gastropoda.

Suriname river, Afobaka, March 1964	<i>Pomacea (Surinamica) sinamarina</i> (Brug.)
	<i>Pomacea (Effusa) glauca</i> (L)
	<i>Pomacea (Limnorum) granulosa</i> (Sow.)
	<i>Doryssa devians</i>

Suriname river after closure of dam  
(Brokponde lake during filling) at  
Station Lokus (Sarakreek),  
29-9, 13-5 and 27-5-1964

<i>Aplexa marmorata</i> Guild.
numerous on floating material
<i>Taphius kühniatus</i> (Clessin).
less numerous
<i>Drepanotrema anatinum</i> (d'Orb.)
numerous
<i>Gundlachia</i> sp.

TRICHOPTERA (det. Dr. G. Marlier, Brussels, Belgium)

Suriname river:

Aloesoebanjaal, 31-12-1963	<i>Synoestropsis</i> sp. 2x
Kapasieval, 17-1-1964	<i>Synoestropsis</i> sp. 6x
	Leptoceridae: <i>Marilia</i> sp. 1x
Saidagoeval, 17-1-1964	<i>Synoestropsis</i> sp. 1x
Tapawatrasoela, 14-8-1964	<i>Chimarra</i> sp. 3x
(Djoemoe)	

Saramacca river:

Awarradam, 4-4-1964

*Synoestropsis* sp. 9x

*Marilya* sp. 2x

Pakka pakka, 8-4-1964

*Leptonema* sp. 3x

For imagines from Surinam see: O.S. Flint, Jr. The Trichoptera of Surinam, Studies on the Fauna of Suriname and other Guyanas, vol. XIV, nr. 79, 1974, 151 pp.

EPHEMEROPTERA (det. Dr. G. Demoulin, Brussels, Belgium)

see: Demoulin, 1966, Contribution à l'étude des éphéméroptères du Surinam, Inst.Roy.Sci.Nat.Belg. 42 (37), 22 pp.

Suriname river:

Grandam, Gran 14-8-1964

*Terpides g.nov. guyanensis* sp.n. 3x

Rio

*Tricorythodes* sp. 1x

Grandam, Gran Rio, 15-9-1964

*Terpides g.nov. guyanensis* n.sp. 7x

Tapawtratoela, 14-8-1964

*Centroptilum* sp. 1x

(Gran Rio, Djoemoe)

*Camelobaetidius g.nov. leentvaari* sp.n. 6x

*Homotraululus* Demoulin nec Traver 1x

*Hermanella* sp. 1 2x

*Simothraulopsis g.nov. surinamensis* sp.n. 1x

*Terpides g.nov. guyanensis* sp.n. 1x

*Tricorythodes* sp. 2x

Tapawtratoela, 15-9-1964

*Hermanella* sp.1. 2x

(Gran Rio, Djoemoe)

*Hermanella* sp.2. 3x

Mamadam, 18-8-1964

*Hermanella* sp.1. 32x

*Hermanella* sp.2. 3x

Saidagoesoela, 19-1-1964

*Hermanella* sp.1. 1x

*Hermanella* sp.2. 1x

Saidagoesoela, 17-1-1964

*Leentvaaria g.nov. palpalis* sp.n. 1x

Kapasiesoela, 17-1-1964

*Leentvaaria g.nov. palpalis* sp.n. 1x

Aloesobanjasoela, 31-12-1963

*Campsurus* sp. 2x

*Homotraululus* Demoulin nec Traver 2x

*Simothraulopsis g.nov. surinamensis* sp.n. 5x

Suriname river, after closing of dam:

Station Sara, 22-4-1964

on floating material:

*Asthenopus* sp. 6x

*Callibaetis* sp. 1x

Saramacca river:

Pakka pakka, 8-4-1964

*Hermanella* sp. 1 1x

Awarradam, 4-4-1964

*Leentvaaria g.nov. palpalis* sp.n. 1x

Suriname river:

Appresina soela, 30-1-1964

*Campsurus* sp. 8x

Afobaka, 29-12-1963

many adults of *Campsurus* sp.  
(flying at the lamp)

HEMIPTERA (det. Dr. N. Nieser, Utrecht, Holland)

From material collected on 13-5-1964 at Station Lokus in Lake Brokopondo, Dr. Nieser identified *Belostoma plebejum* 4x, *B. micantulum* 12x, *B. gestroi* 1x, *Tenagobia socialis* 1x, *Mesovelia* sp. juv. 1x, *Belostoma* sp. juv. numerous. Also *Martarega hungerfordi*, *Buenoa communis* and *Buenoa incompta* were recorded. See his publication in: Studies on the Fauna of Suriname and other Guyanas, vol. XVI, nr. 59, 1975, entitled: The water bugs (Heteroptera Nepomorpha) of the Guyana Region, 308 pp.

Other collected invertebrates such as Odonata and Coleoptera were sent to the Museum of Natural History at Leiden for identification.

PLANKTON  
DIATOMÉAE

Mr. A. van der Werff (De Hoef, Holland) verified the determination of *Eunotia asterionelloides* and *Actinocyclus normanni*.

DESMIDIACEAE

Dr. P. Bourrelly (Paris, France) received samples for the verification of the Desmids, and for comparison with samples from French Guyana. The results will be published in his paper.

ROTIFERA

The Rotifera on Plate XVII of my publication (1975) are not correctly indicated. Dr. W. Koste (Quakenbrück, Germany) drew my attention to the fact that b and d have to be inverted and that figure f is comparable to the species *Platyias leloupi latiscapularis* n.ssp. Koste.

Dr. Koste recognized in fig. f the new species, which he described in his publication from 1973: Rotatorien aus einem Ufersee des unteren Rio Tapajós, dem Lago Paroni (Amazonien), Gewässer und Abwässer H 53/54, 1974, pg. 43-69. Dr. B. Berzins (Lund, Sweden) identified the Rotifera of a few samples taken before and just after the closing of the dam in the Suriname river. The results are given below.

Frequency: 1-10 Station 1, Afobaka	Dead= +	(det. B. Berzins)	
		before closing Dec. 4	after closing March 11 April 8 1964
<i>Ascomorpha saltans</i> Bartsch		2	2
<i>Ascomorpha ovalis</i> (Berg.)		.	
<i>Ascomorpha ecaudis</i> Perty		.	7
<i>Anuraeopsis fissa fissa</i> (Gosse)		.	2
<i>Asplanchna priodonta</i> Gosse		.	.
<i>Bdelloidea</i>		4	2
<i>Brachionus falcatus</i> Zach.		1	
<i>Brachionus quadridentatus quadridentatus</i> (Mueller)			1

Frequency: 1-10

Dead= +

(det. B. Berzins)

Station 1, Afobaka

before closing  
Dec. 4      after closing  
March 11 April 8 1964

	before closing Dec. 4	after closing March 11	April 8 1964
<i>Conochiloides coenobasis</i> Skor.	.	5	1
<i>Cephalodella cf. belone</i> Myers	.		
<i>Cephalodella gibba</i> (Ehrbg.)		.	
<i>Colurella uncinata bicuspidata</i> (Ehrbg.)		+	
<i>Dissotrocha</i> sp.	1	.	
<i>Filinia longiseta</i> (Ehrbg.)	1	1	2
<i>Hexarthra insulina</i> Hauer	1	5	5
<i>Keratella americana</i> Carlin	4		
<i>Itura viridis</i> (stenroos)			.
<i>Lacinularia flosculosa</i> (Mueller)	.		
<i>Lecane hastata</i> (Murray)	+	1	
<i>Lecane crepida</i> Harring	3		
<i>Lecane luna praesumpta</i> Ahlstrom	1		
<i>Lecane papuana</i> (Murray)	2		
<i>Lecane bulla bulla</i> (Gosse)		2	2
<i>Lecane luna luna</i> (Mueller)		.	
<i>Lecane bulla goniata</i> (Harr. & Myers)		.	
<i>Lecane closterocerca</i> (Schmarda)		1	
<i>Lecane hamata</i> (Stokes)		1	
<i>Lecane rotundata</i> (Olofs)		.	
<i>Lecane ungulata ungulata</i> (Gosse)		.	
<i>Lecane leontina</i> (Turner)		1	.
<i>Macrochaetus rossicus rossicus</i> (Mich.)	3		
<i>Mniobia</i> sp.	.		
<i>Polyarthra vulgaris</i> Carlin	4	6	4
<i>Polyarthra remata</i> Skorik.	4	2	4
<i>Polyarthra cf. dolichoptera</i> Idel.	1		4
<i>Platyias quadrocornis quadricornis</i> (Ehrbg.)		1	.
<i>Platyias patulus macracanthus</i> (Daday)			.
<i>Ptygura</i> sp.		.	
<i>Rotaria</i> sp.	.	.	
<i>Sinantherina</i> sp.	.		
<i>Sinantherina spinosa</i> (Thorpe)			4
<i>Synchaeta oblonga</i> Ehrbg.	.		
<i>Synchaeta pectinata</i> Ehrbg.		2	1
<i>Synchaeta stylata</i>	1		
<i>Testudinella brycei</i> Hauer	.		
<i>Testudinella patina patina</i> (Herm.)		1	
<i>Testudinella reflexa</i> (Gosse)		.	
<i>Testudinella patina trilobata</i> (And. & Shep.)		.	
<i>Trichocerca mucosa</i> Hauer	3	2	.
<i>Trichocerca pusilla</i> (Jenn.)	.		1
<i>Trichocerca birostris</i> (Mink.)		1	1
<i>Trichocerca montana</i> Hauer			.

## Station Sarakreek det. B. Berzins

before closing  
Dec. 11after stagnation  
Febr. 12 1964

<i>Ascomorpha ecaudis</i> Perty		.
<i>Anuraeopsis fissa fissa</i> (Gosse)		1
<i>Bdelloidea</i>		3
<i>Brachionus chelonis</i> Ahlstr.	+	
<i>Cephalodella gibba</i> (Ehrbg.)		1
<i>Cephalodella gracillis</i> (Ehrbg.)		.
<i>Colurella uncinata bicuspidata</i> (Ehrbg.)	.	
<i>Cephalodella forficula</i> (Ehrbg.)	+	
<i>Conochiloides coenobasis</i> Skor.		2
<i>Colurella uncinata uncinata</i> (Mueller)		.
<i>Colurella obtusa obtusa</i> (Gosse)		.
<i>Collotheca cf. pelagica</i> (Rouss)		3
<i>Cupelopagis vorax</i> (Leydi)		.
<i>Dissotrocha macrostyla</i> (Ehrbg.)	+	
<i>Dicranophorus cf. caudatus</i> (Ehrbg.)	+	
<i>Euchlanis propatula</i> (Gosse)		.
<i>Euchlanis triquetra</i> Ehrbg.		.
<i>Beauchampiella eudactyloa</i> (Gosse)		.
<i>Filinia longiseta</i> (Gosse)	1	2
<i>Hexarthra insulina</i> Hauer		4
<i>Keratella americana</i> Carlin	.	.
<i>Lecane closterocerca</i> (Schmarda)	.	3
<i>Lecane lunaris lunaris</i> (Ehrbg.)	+	.
<i>Lecane bulla bulla</i> (Gosse)	+	3
<i>Lecane luna luna</i> (Mueller)	.	.
<i>Lecane pyriformis</i> (Daday)	.	.
<i>Lecane furcata furcata</i> (Murray)	.	.
<i>Lecane monostyla</i> (Daday)	.	.
<i>Lecane cornuta cornuta</i> (Mueller)	.	.
<i>Lecane hamata</i> (Stokes)	.	1
<i>Lecane pusilla</i> Harring	.	.
<i>Lecane cf. copeis</i> (Harr. & Myers)	.	.
<i>Lecane hastata</i> (Murray)		2
<i>Lecane sylvatica</i> (Harring)		4
<i>Lecane crepida</i> Harring		.
<i>Lecane papuana</i> (Murray)		.
<i>Lecane quadridentata</i> (Ehrbg.)		1
<i>Lepadella patella patella</i> (Mueller)	.	2
<i>Lepadella ovalis</i> (Mueller)	+	
<i>Lepadella cf. venefica</i> Myers	+	
<i>Lepadella</i> sp.		.
<i>Lepadella rhomboides leentvaari</i> ssp.n.		.
<i>Lepadella imbricata</i> Harring		1
<i>Lepadella cryphaea</i> Harring		.
<i>Lophocharis salpina salpina</i> (Ehrbg.)	+	1
<i>Monommata longiseta</i> (Mueller)		.
<i>Platyias quadricornis quadricornis</i> (Ehrbg.)		6

Station Sarakreek det. B. Berzins	before closing Dec. 11	after stagnation Febr. 12 1964
<i>Polyarthra remata</i> Skor.		2
<i>Polyarthra cf. dolichoptera</i> Idels		1
<i>Polyarthra vulgaris</i> Carlin		1
<i>Proales cryptopus</i> Wulfert		.
<i>Rotaria</i> sp.	.	.
<i>Taphrocampa clavigera</i> Stokes		.
<i>Trichocerca mucosa</i> Hauer		.
<i>Trichocerca brachyura</i> (Gosse)		.
<i>Trichocerca birostris</i> (Mink.)	+	1
<i>Trichocerca cf. rattus</i> (Mueller)	+	.
<i>Trichocerca tetractis tetractis</i> (Ehrbg.)		.

At Sara station on 13 May 1964 many colonies of Rotifers were found attached to substrates such as dead leaves and trees. A sample was analyzed by Berzins with the following results:

Bdelloidea	1
Lacinularia floscularia (Mueller)	1
Octotrocha speciosa Thorpe	1
Sinatherina socialis (Linnaeus)	3
Rotaria sp.	1

*Lepadella rhomboides leentvaari* ssp.n. Berzins (see fig. description Berzins)

Like the nominate form; differs with two lateral notches occipital on the lorica, and with two larger lateral constrictions on the posterior part of Lorica. The wedge on the dorsal side is sharp and simple, but in the posterior part is divided in five low projections. Length of lorica 100  $\mu$ , width 65  $\mu$ . Found in few individuals in the samples from Sarakreek, Surinam, 12-2-1964.

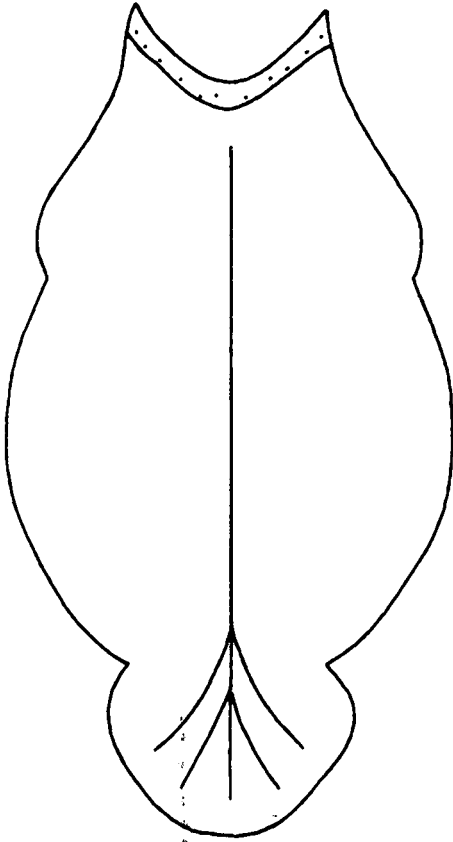
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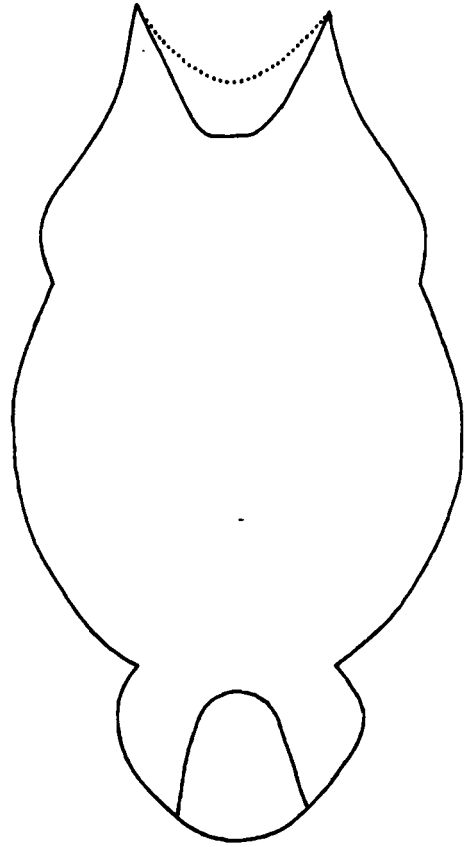
Accepted for publication in January 1978

*Lepadella rhomboides leentvaari*  
subsp. nova

12. feb. 1964. Surinam.



A = dorsal



B = ventral

B. Berzins