

JOURNAL I

Invertebrate animals

Observer:Group Bochum..... Date: 20th feb.'10 Time: 10-12 am..

Name of the watercourse:Ruhr.....

Examination center: Bochum Dahlhausen, aprox. 200m before the weire

Weather conditions: very cloudy
(cloudiness, precipitation, wind)

Temperature (air): 2,9°C

Hydro-engineering circumstances: shoreline stabilisation (stones), only few plants
(weires, Rauschen, shoreline stabilisations and others)

Flow velocity: 5,41 m/min (close to the shore); 7 m/min (in the middle)

Turbidity: clear, slightly blear
(clear, blear, nearly intransparent)

Smell: none; foam formation: yes / no

Iron sulphide under Stones: yes / no in Sediment: yes / no

Algal bloom: yes / no

Aquatic plants:.....none discovered.....

Plants in the shore area:few reed.....

There was a small path close to the shore. Many joggers, bikers and dog-owner were passing by during the examination. Beneath the path was a cow paddock. The substrates around were all wet, because it had just been thawing and 20 cm of snow just had been melted.

Physico-chemical parameters:

Temperature (water): 4,3 °C

pH: 7,5

PO₄³⁻: 0,5 mg/l

NO₃⁻: ≥10 mg/l; NO₂⁻: ≤0,1 mg/l

NH₄⁺: 0,05 mg/l - 0,2 mg/l [aprox. 1 mg/l]

Oxygen content: 8,9 mg/l; oxygen saturation in %: 68

BOD₅-value (in mg/l): 0,1

Total hardness: 6 - 10 °d;

Carbonat-hardness: 3 - 6 °d; therefore acid binding capacity = 0,54 - 1,08

Found Organismen:

	Organismen: Scientific name (german name)	quantity
Group 1	Bithynia tentaculata (Langfühlerige Schnauzenschnecke)	2
	Margaritifera margaritifera (Flussperlmuschel)	1
	Sphaerium sp. (Kugelmuschel)	3
	Gammarus roeseli (Flussflohkrebs)	2
Group 2	no animals found	0
Group 3	Fam. Baetidae	3
	Chironomus thummi (Zuckmückenlarven)	7
	Habrophlebia	5
	Planorbarius corneus (Posthornschnecke)	1
	Sphaerium sp. (Kugelmuschel)	5
	Larvae of Hydrous sp. (Wasserkäferlarven)	3
Group 4	Sphaerium sp. (Kugelmuschel),	4
	Pisidium sp. (Erbsenmuschel)	1
	Larvae of Hydrous sp. (Wasserkäferlarven),	1
	Margaritifera margaritifera (Flussperlmuschel)	1
	cf. Tabanus sp. (Bremsenlarven),	2
	Gammarus pulex (Gemeine Flokrebse),	2
	Asellus aquaticus (Wasserasseln)	3
Group 5	Chironomus thummi (Zuckmückenlarve)	2
	Habroleptiodes modesta (Eintagsfliegenlarve)	10
	Radix peregra f. ovata (Eiförmige Schlammschnecke)3 mal	3
	Unionidae (Flussmuschel)	1

Short overview:

The physico-chemical parameters indicate a quality grade of II to III. The high amount of nitrate and phosphate is astounding.

This is conform to the organismen found. They also indicate a quality grade II-III.

The result of the calculation of the saprobic index is 2,3 which is the betamesosaprobic stage. The result "2,3" indicates exactly the middle of "modest contaminated" and "critical contaminated".