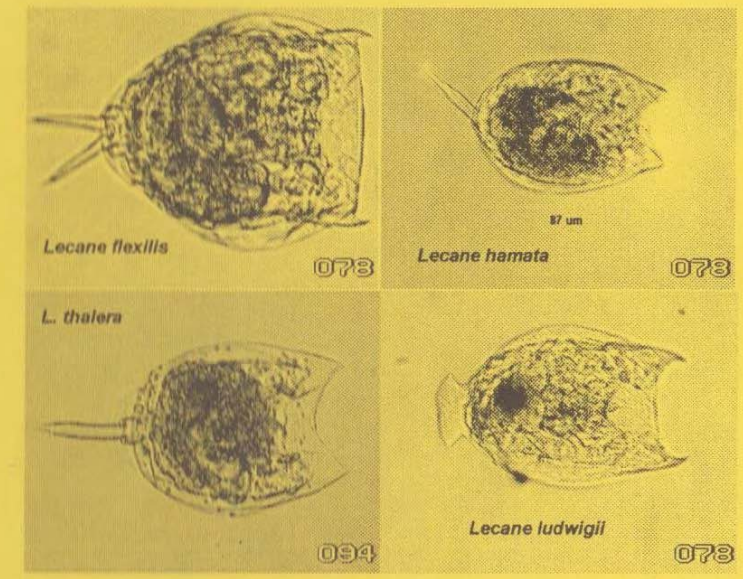
ROTIFER NEWS

A newsletter for rotiferologists throughout the world



Issue 33: December 2000

In this Issue:

PRODUCED AT

The Murray-Darling Freshwater Research Centre

ISSN 1327-4007

Rotifer News Issue 33: December 2000

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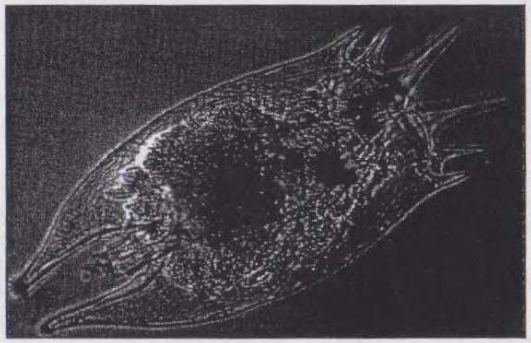
The cover:
Some Western Australian lecanids thanks to Stuart Halse at the W.A. Wildlife Research Centre, Wannaroo, W.A.
[.jpgs captured at MDFRC using Image Pro Plus (Media Cybernetics)]

This issue's 'Feature Creature': *Brachionus novaezealandiae* (Morris, 1912)



[Send your favourite image(s) with a few lines of details for the 'Feature Creature' in coming issues! To <russell.shiel@adelaide.edu.au>]

ROTIFER NEWS

Rotifer News is a newsletter for professional and amateur investigators of the Rotifera. The newsletter is not part of the refereed scientific literature (e.g. *Limnol. Oceanogr., Freshw. Biol., Oecologia* etc) and should not be so cited. It is a means of informal communication between widely dispersed workers with a common interest, where news, abstracts, work in progress, requests, recent publications and so on can be advertised or circulated.

Rotifer News is produced at The Murray Darling Freshwater Research Centre once or twice a year, depending on contributions from readers and regional editors. Regional editors are listed below. Back issues of the newsletter are available from Bob Wallace or Russ Shiel on request. Assistance with production and mailing cost is always appreciated!

If you know of anyone who may wish to receive *Rotifer News* who is not presently on the mailing list, please pass on their address to the nearest regional editor

* * * * * *

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Editorial

Another belated issue of our newsletter...this is the June 2000 issue held over to December...Jan...Feb...~ to give all you hardworking researchers time to get your contributions, publications (recipes?) to me in order to let everyone know what you're doing...hmmm! Well, there are a few contributions from the loyal readers, and thanks are due to many who sent copies or lists of published papers...they, at least, have kept coming in, so this issue has a reasonably comprehensive bibliography of what we've been doing recently. If you have a paper that isn't there....did you let me (or one of the regional editors) know?

Since the last issue we've had the much-enjoyed IXth Int. Rotifer Symposium in Khon Kaen, Thailand....with apologies to La-orsri for the misspelling on the cover ...it's hard to get good help (!!)....as ever, the proofreading process fell over late one afternoon when Kwik Kopy was waiting for the images! Electronic images takes us a bit closer to having *Rotifer News* on the Rotifer website, courtesy of Liz Walsh. When the newsletter goes electronic I'll include a reply card with the hard copy of the newsletter...please take the time to respond to let me know if you do/don't want to continue to receive the hard copy. Some saving of costly postage from Australia would be a benefit for the coffers!

Finally, thanks to Ros for letting us all know of the sad passing of Nan Duncan, who harboured a warm fuzzy glow for rotifers as well as her long time interest in things microcrustacea-ish. She will be missed.

Russ Shiel

In Memoriam

Professor Birger Pejler died in Uppsala on 5 November 1999 at an age of 75 years. Birger Pejler was born in Örebro, Sweden on 3 February 1924. He studied zoology, botany and geography at Uppsala University. Inspired by Prof. Sven Ekman he made field studies of zooplankton in Swedish Lapland and continued these studies in Swedish lowland lakes. His Ph.D. thesis in zoology at Uppsala University in 1957, "Studies on the taxonomy and ecology of planktonic Rotatoria", dealt mainly with planktonic rotifers of northern and central Swedish lakes but also with general evolutionary aspects on Rotatoria. After his graduation he held positions as lecturer in zoology at Uppsala and Göteborg Universities. In 1967-1968 Birger Pejler took a position as lecturer at Kenya Science Teachers College in Nairobi where he also was the head of the Biology Department.

Birger Pejler was a true naturalist with very broad interests and an impressive knowledge about different aspects of nature. He found great pleasure in sharing his knowledge with students and colleagues during excursions and as a teacher. After returning from Africa he resumed his position as lecturer in zoology at Uppsala University. He then started a course in tropical ecology and also gave other courses in ecology and wrote a textbook (in Swedish). There is no doubt that

these activities were among the most important seeds for the further development of ecology at Uppsala University. His broad interests also brought him to the new volcanic island of Surtsey as a participant in expeditions to study the development of the terrestrial microfauna. He was often consulted as an expert on water management problems and was a member of the advisory board of Limnologica. He edited a special issue of Limnologica on Nordic Limnology in 1990.

In 1972 Birger Pejler was offered a position as Professor in the Department of Limnology, Uppsala University, a position he held until his retirement in 1990. His main task then was to supervise the many PhD students with an interest in freshwater fauna. During 1974-1980 he also served as Director of the Department of Limnology.

Birger Pejler's main scientific interest was the ecology, biogeography and taxonomy of freshwater Rotatoria. He published important papers on the global distribution of rotifers and on the relation between environmental factors and occurrence of rotifer species. He established a close co-operation with Dr. Bruno Berzins at Lund University and published several papers together with him based on Dr. Berzins' extensive regional studies of rotifers in south Swedish lakes. Some of these papers appeared after the death of Dr. Berzins.

Birger Pejler was an internationally leading specialist on rotifers and was a very active participant in the International Rotifer Symposia, which have been held every three years since the start in Lunz in 1976. He hosted the 3rd International Rotifer Symposium in Uppsala in 1982 and planned to participate in the 8th symposium in Minneapolis in 1997, but was unfortunately unable to do so because of illness. His contribution to that symposium, "History of rotifer research in northern Europe", was, however, published in the Symposium proceedings in 1998 and became his last publication.

With the death of Birger Pejler limnology has lost a devoted naturalist, scientist and appreciated teacher, whom colleagues and students will remember as a loyal friend with a warm heart and a wonderful, soft-spoken humour.

Ingemar Ahlgren
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Dr Annie Duncan 1926- 2000

Members of the Rotifer Family will be saddened to learn of the death of Nan Duncan on October 3rd, 2000, from a cerebral haemorrhage fifteen months earlier. Although she had retired from her post as Reader in Ecology at Royal Holloway College, University of London, some years before, she had continued to work as Emeritus Reader at the Royal Holloway Institute of Environmental Research. Indeed at the time of her illness, she was preparing for an extensive project which she had initiated, involving colleagues from both Europe and South-East Asia.

Nan may be best known to many readers of "Rotifer News" for her participation in some Rotifer Symposia. Her paper to the fifth Symposium in Lake Garda, Italy, is perhaps a good indicator of her interests in rotifers. This review paper was entitled "Food limitation and body size in the life cycles of planktonic rotifers and cladocerans" (Hydrobiologia 186/7: 11-28,1989). The two groups were compared, and considered in terms of the ecological implications of different food concentrations. This review brought together the work of many of Nan's own postgraduate students and colleagues, as a perusal of the Acknowledgements and Reference sections reveals.

The ability to bring together workers in associated fields and to gather their separate results into an overall picture was one of Nan's particular talents.She did not confine herself to one group of organisms or to one trophic level, but was keen to see an ecosystem as a whole. This interest was put to good use in work with colleagues on the reservoirs which supply London's drinking water, resulting in a more extensive understanding of the relationships between management practice and reservoir organisms, from rotifers to fish. She also turned her attention to the slow sand filters used to purify London's drinking water and, again with colleagues and students, studied not only the rotifers but also other microfauna of these particular habitats.

Nan's researches took her to many localities outside the London area, however, including Scotland, Sri Lanka, Brazil, the United States and the Philippines. She herself had spent her early years in Russia, though born in London, and spoke Russian and Polish. I remember that we had reason to be grateful for this ability during some symposium meetings, when Nan helped to provide a translation service during question and answer sessions. Discussion and the exchange of ideas were of great importance at every level, whether arranging research seminars and workshops for her students or taking part in organisations such as SIL (International Limnological Association). She was also the first secretary of PEG, its working group on plankton ecology.

Talking with colleagues and friends was one of her great pleasures, together with wining and dining, music of a wide range of types and a good party. I remember her now, at the Edinburgh Rotifer Symposium, enjoying the Scottish dancing and exhorting everyone to get to their feet and join in "The Dashing White Sergeant"!

Ros Pontin.

WWW Publishing - a reply

To The Global Rotifer Research Community:

The last issue of Rotifer News (#32) published a criticism by Russ Shiel & Claudia Ricci of the rotifer related material available on the Internet. I feel obligated to respond to this because I have maintained a bdelloid database on the Internet since 1996 (members.aol.com/bdelloid1) and a general information site about bdelloids since 1997 (members.aol.com/bdelloid1/deloid.htm). I have justifiably cited the database in one published paper (the alternative would have been to list more than 300 references in a 10-page paper) despite the objections of one reviewer, who, it seemed, didn't even bother to look up my database. I try to revise both of these sites as new information becomes available about once a year. If you find any errors in any of my sites, please let me know & I will correct them. After all, that's the beauty of the Internet, unlike printed matter, nothing may remain obsolete for too long.

One of the curious criticisms in the RN article seems to be that many sites on the Internet have barely more than the author's record of what has been found in a backyard pond. What is wrong with that? Don't you think making people aware of what lives in their backyards is one way of introducing them, especially the kids, to the science of natural history? Since I placed "An Introduction to Bdelloid Rotifers" on the Internet, it has received more than 1000 visitors. Many of these, amateurs & professionals, have contacted me by e-mail for additional information. Some of these were basic questions from school children & others involved serious

scientific issues. I have forwarded questions dealing with monogononts to Russ Shiel & Bob Wallace on more than one occasion.

Another criticism in the RN article is that some Internet sites have "obsolete taxonomy". Well, let's face it, as long as there is taxonomy, there will be obsolete taxonomy, regardless of the publishing medium. I know of at least one recent paper published in a "peer-reviewed" journal by one of us in which ancient names for some bdelloids, names that were invalidated almost 100 years ago, were used. Now, that's obsolete! And it will remain so as long as paper lasts.

And don't get me started on the over glorified peer-review process. Who can deny with a straight face how subjective & ugly peer-review can get? The National Institutes of Health has been considering starting an Internet site where bio-medical articles that have NOT been peer-reviewed will be published (read about it at http://www.nih.gov/welcome/director/pubmedcentral/pubmedcentral.htm).

Come on people, get on with it. It's a new millennium.

I am sorry I missed the chance to mingle with you in Thailand.

Best wishes to all.
Aydin Örstan

[illegible] Rotifer Symposium [illegible]

During January 16-23, 2000, 113 attendees from 25 countries enjoyed the hospitality of La-orsri Sanoamuang and her colleagues at Khon Kaen University. This first rotifer meeting to be held in Asia, and held in Khon Kaen's Hotel Sofitel Raja Orchid, was supported by Khon Kaen University, INVE Asia Services Limited and the Tourist Authority of Thailand. Presenters gave 8 invited reviews, 43 oral and 43 poster presentations, which were assembled by La-orsri and her 3 editorial assistants (Hendrik Segers, Russ Shiel and Ramesh Gulati) for the symposium proceedings volume. The volume will appear in 2001 as volume **446/447** in the *Hydrobiologia / Developments in Hydrobiology* series, as had seven of the eight previous symposia.

Our Thai hosts made sure that Khon Kaen was not all work! Social activities included Thai dancing, tasty Thai cuisine [Singha beer], a lake cruise (Ubolrat reservoir), barbecue [Singha beer], Thai music...a most enjoyable experience for all of the attendees who had not experienced Thai hospitality previously, and doubly so for those of us who had!! The editorial assistants were again graciously hosted by La-orsri and her Khon Kaen colleagues for the final editing and assembly of the manuscripts for the symposium volume. Turn to the centerfold for some of the less serious activities of this most successful meeting [with apologies to those who should have been in the centerfold, but were dancing too fast for the technology to capture them.....!]

Russ Shiel

[illegible] Surgeon in the Royal Navy & Microscopist with the World at His Feet

By
James D. Solliday

Abstract:

Dr. V. Gunson Thorpe was a Surgeon in the Royal Navy serving on ships assigned to the Far East for the purpose of conducting surveys. It seems that Dr. Thorpe's service in the Royal Navy lasted from the mid 1880's to about 1908. His assignments afforded him the greatest opportunity to pursue his passion for natural history and to capitalize on his skills as a practicing microscopist. His high level of education and training as a physician made him a perfect candidate for the discovery and description of new species. His familiarity with the microscopic flora and fauna and use of proper taxonomy indicate he was well qualified for his work. The respect and confidence his contemporaries gave him indicate he was already well known for his work on the Rotifera. His name also shows up as a consultant to Mr. Arthur C. Cole, the well-known English slide maker. Dr. Thorpe contributed to Cole's series entitled *Studies in Microscopical Science,* published from 1882 to 1883. From his correspondence and publications it is clear that he was affiliated with a number of scientific organizations. We know without doubt that he was a member of both the Royal Microscopical Society and the Quekett Microscopical Club, both headquartered in London. It is also likely that he was associated with a number of scientific societies in Australia, at least as a regular visitor. In addition to his skill at describing his discoveries, his most important talent was his ability as an illustrator. His drawings are quite beautiful; especially those created as a result of his work with the microscope. The drawings as well as the notes are recorded in two elegant Victorian notebooks. Both were part of his small library, which included off-prints of his own publications. This collection also consists of publications sent to him by other workers as well as personal correspondence. The correspondence includes drawings sent to him and subsequently pasted into his notebooks for reference. However, the most important element of this treasure is the large number of Thorpe's original drawings scattered throughout the notebooks. These original drawings, which were made in the field, can now be compared with the engravings that illustrated his publications. Habitat information as well as dates and descriptions are also found near each drawing. Browsing through Dr. Thorpe's notebooks allows the reader to relive the discoveries and adventures of this extraordinary Victorian microscopist.

[**Ed. Note:** Jim Solliday has provided a remarkably detailed review of Surgeon Thorpe's life and work, including scans of his coloured drawings. To do Jim's efforts, and Surgeon Thorpe's drawings, justice, they will appear in their entirety, in colour, in issue **#34** of *Rotifer News.* I will make every effort to complete the issue shortly after the triennial meeting in Illmitz, i.e. after June 2003.]

Calls for Material

From Willem De Smet:
My requests: for a study on trophi morphology of Synchaetidae I seek for *Ploesoma* spp. and especially *Pseudoploesoma formosum*. If someone has some specimens of *Trichotria curta* they will be very welcome also.

I dare not ask anymore for Dicranophoridae and Proalidae (no matter which ones): the different requests in the former Rotifer Newletters resulted in 1(one) positive response. Maybe I better ask for free beer or a good bottle of wine?

Willem H. De Smet, University of Antwerp, RUCA-Campus, Department of Biology, Lab. Polar Biology and Palaeobiology, Groenenborgerlaan 171, B-2020 Antwerp, Belgium. E-mail : wides@ruca.ua.ac.be

From Bob Wallace and/or Liz Wash:
Any member of the Asplanchnidae, but especially *Harringia*. We need them in 70% EtOH.

R.L. Wallace, Ph.D., Department of Biology, Ripon College, 300 Seward Street, Ripon, WI, 54971-0248. E-mail: WallaceR@Ripon.edu, Voice: 920-748-8760, FAX: 920-748-7243

News/Views

From Claudia Costa Bonecker

Here will talk about the richness of rotifers in the Upper Paraná river floodplain, in the South of Brazil. We studied several distinct environments in this floodplain with differents current velocity, such as lagoons, rivers, streams and channels, during aproximatelly ten years. We found 154 taxa, including planktonic, littoral, periphytic, and benthic species. A total of 21 families has been recorded, mainly Lecanidae (26 taxa), Brachionidae (26 taxa), and Trichocercidae (19 taxa).

The highest number of taxa was recorded in lagoons, what is probably related to the greater influence of shoreline vegetation, in addition to the greater stability and low current velocity of these environments.

In all environments, 30 taxa occurred only near shore, e.g. *Lecane remanei, Euchlanis oropha, Floscularia melicerta* and *Mytilinia mucronata*, and 16 taxa in the open water, e.g. *Dicranophorus epicharis, Colurella obtusa*, and *Lepadella donneri*. When we compared these regions, more taxa were registred near the shore, due the presence of the aquatic macrophytes.

The richness was generally influenced by variations in the hydrological level in all

the environments studied. Higher species richness, included no-planktonic and planktonic taxa, and faunistic homogenization of the habitats are found during high water periods. It is probably observed because of the more intensive conection among the environments caused by flooding.

More details can be found in Lansac-Tôha *et al.* (1997) (Lansac-Tôha, F.A., Bonecker, C.C., Velho, L.F.M., Lima, A.F. 1997. Comunidade zooplanctônica. In: Vazzoler, A.E.A.M., Agostinho, A.A., Hahn, N.S. (Eds.). *A Planície de Inundação do Alto Rio Paraná:* aspectos físicos, químicos, biológicos e socioeconômicos. Maringá: Editora da Universidade Estadual de Maringá. p. 117-155).

Our staff works at the State University of Maringá, Department of Biology, Nucleus of Research of Limnology, Ichtyology and Aquaculture, Postgraduate Course in Continental Aquatic Environments, State of Paraná, Brazil. Adress: Nupélia/UEM, Av. Colombo, 5790, Bl. H-90. 87020-900. Maringá-Paraná, Brazil. E-mail: bonecker@nupelia.uem.br

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Completed Theses - Congratulations!

APARICI-SANZ, EDUARDO - 1999. (PhD) *Estratègies reproductives i assignació sexual en rotifers.* Univ. de València. 159 pp. K/W: ecology, parthenogenesis, reproduction, rotifers, sexuality.

BOXHORN, JOSEPH - 1999. (PhD) *Laboratory studies of the population dynamics of the rotifer* Brachionus calyciflorus *Pallas*. It examined the responses of steady-state chemostat rotifer populations to a variety of perturbations. (jboxhorn@uwm.edu)

VIRRO, TARVI - 1999. (PhD) *Life cycles of planktonic rotifers in Lake Peipsi.* Ph.D. Dissertation, University of Tartu, Estonia. 101 p. K/W: Lake Peipsi, life cycles, plankton, *Polyarthra*, rotifers.

LATEST GUIDES VOLUME

Backhuys Publishers are now producing the *Guides to Identification of the Microinvertebrates* series. Volume **18** in the series will be the sixth on families of Rotifera.

Families covered in *Guide* 6:
Asplanchnidae by Susana Jose de Paggi
Gastropodidae by Stanislaw Radwan & Irena Bielanska-Grajner
Lindiidae by Hendrik Segers
Microcodinidae by Willem H. De Smet (bulky chapter, of course...)
Synchaetidae by Eric D. Hollowday
Trochosphaeridae by Hendrik Segers
Filinia by La-orsri Sanoamuang

I suppose this volume is particularly relevant to the general limnologists amongst us, with groups like *Filinia, Asplanchna, Polyarthra,*...Of course, an obituary for Filiniidae might be in order...

Hendrik Segers

UPDATED BIBLIOGRAPHY: *ROTIFER NEWS* #33

Ed. note: An electronic copy of this, or any previous bibliography in Rotifer News, can be requested from the Production Editor <russell.shiel@adelaide.edu.au>

To maintain a comprehensive list of recent publications- authors should remember to pass on copies, or at least publication details, to one of the regional editors, or directly to Russ Shiel at MDFRC. In the list below, only the address for reprints is included. Summaries have been deleted to save space, with only keywords included. The electronic copy contains full summaries. The major subject areas in each citation are categorized below - many papers include several topics.

Aquaculture: 3, 9, 10, 14, 21, 22, 24, 25, 30, 31, 41, 42, 64, 68, 69, 82, 94, 95, 98, 109, 110;

Anatomy/Behaviour/Morphology/Physiology: 27, 43, 48, 51, 58, 59, 90;

Biochemistry/Genetics/Pharmacology: 9, 31, 32, 36, 56, 70, 80, 100;

Biogeography/Taxonomy/Evolution: 2, 4, 12, 16, 18, 19, 20, 36, 44, 53, 56, 57, 78, 79, 81, 84, 85, 86, 87, 89, 92, 97, 99, 100, 111

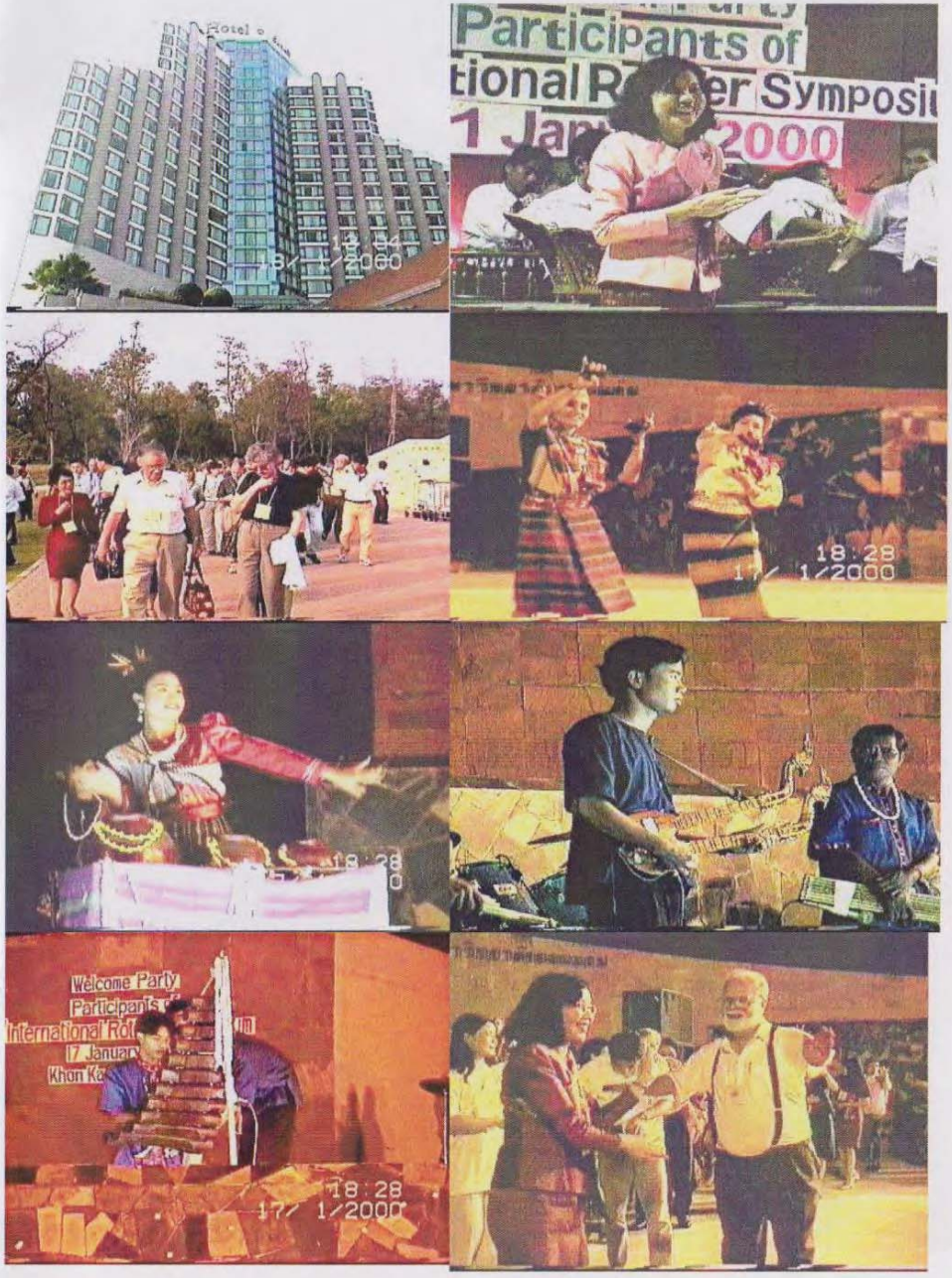
Ecology/Population dynamics/Food webs: 1, 4, 5, 6, 7, 8, 11, 13, 15, 23, 26, 28, 33, 35, 37, 38, 39, 40, 45, 46, 50, 52, 54, 55, 60, 61, 62, 63, 64, 65, 66, 67, 71, 72, 73, 75, 77, 83, 88, 91, 93, 96, 101, 103, 105, 106, 107, 108;

Methods/Research: 7, 49, 53, 54;

Reproduction: 104;

Water quality/Toxicology: 17, 34, 47, 61, 74, 76, 102, 112.

1. AKOPIAN, M., J. GARNIER & R. POURRIOT, 1999. A large reservoir as a source of zooplankton for the river: structure of the populations and influence of fish predation. *J. Plankt. Res.* **21**, 285-297. K/W: cladocerans, fish predation,

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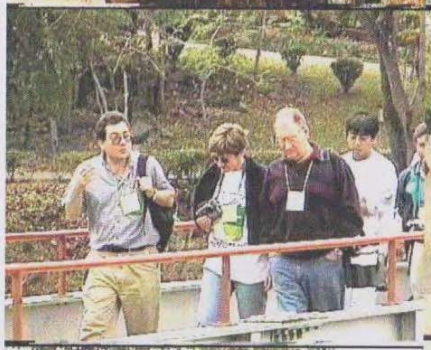

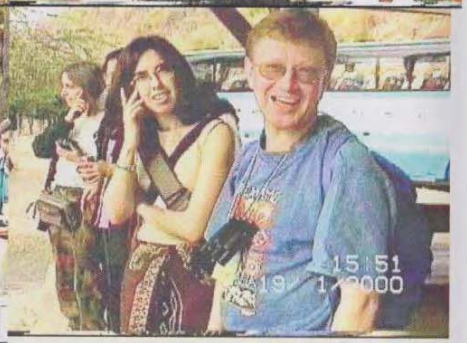
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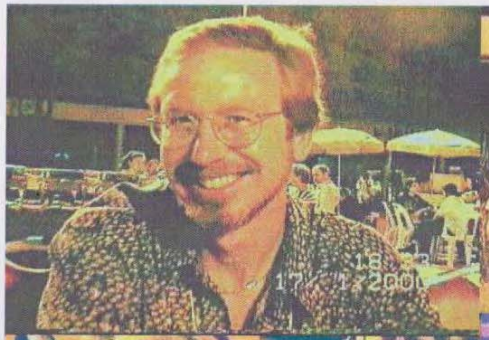

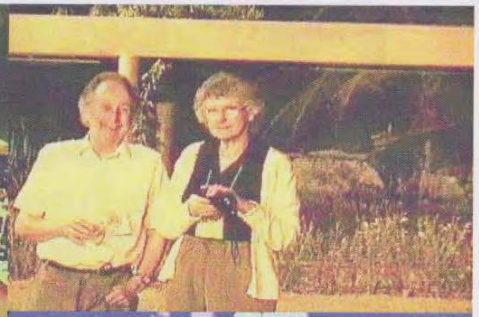


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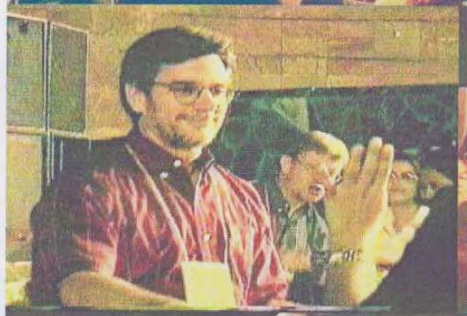

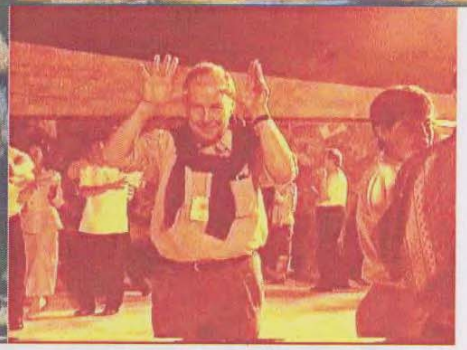

inoculation, limnoplankton, microcrustacea, potamoplankton, reservoir, river, rotifers, seine, selective loss, source pools.

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webs, *Daphnia carinata*, trophic interactions, foraging strategies, functional-response, selective predation, populations, induction, zooplankton.

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Estonian Acad. Sci. Biol. Ecol. 49, 3-18. K/W: ecosystem, Estonia, Lake Peipsi, limnology, microcrustacea, rotifers, zooplankton.

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[Ed note...remaining references carried over to RN #34]

NEW ROTIFERA

Rotifers described since the last issue of *Rotifer News:*

Bdelloidea
Habrotrocha lens Song & Kim, 1992: Korea [#92]
Habrotrocha parvipes Song & Kim, 1992: Korea [#92]
Habrotrocha plana Song & Kim, 1992: Korea [#92]
Macrotrachela bullata Song & Kim, 1992: Korea [#92]
Macrotrachela crassicalcar Song & Kim, 1992: Korea [#92]

ERROR! Ed.

Monogononta
Encentrum barti De Smet, 2000: Belgium [#18]
Encentrum listensoides De Smet, 2000: Belgium [#18]
Encentrum tenuidigitatum De Smet, 2000: Belgium [#18]
Lecane baimaii Sanoamuang & Savatenalinton, 1999 : Thailand [#85]
Macrochaetus kostei Jose De Paggi *et al.*, 2000: Brazil [#44]
Polyarthra indica Segers & Babu, 1999: India [#89]

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