

The Compleat Mesoangler

A Newsletter About Mesozoic Fishes

Volume 7, Number 1

June 21, 2000

III International Meeting on Mesozoic Fishes

**Systematics, Paleoenvironments and
Biodiversity.**

Serpiano (TI-CH) —August 2001

Dear Colleagues,

We are very glad to host the third international meeting on Mesozoic Fishes in one of the most famous sites for these fossils, the Monte San

Giorgio-Besano area.

The organization of the meeting is supported by the

Dipartimento di Scienze della Terra of the Milano University (Andrea Tintori), the Museo Cantonale di Storia Naturale in Lugano (Markus Felber), the Palaeontologisches Institut und



Gaël Clement, Didier B. Dutheil, Arnaud Filleul and René Zaragüeta are Phd students, doing their thesis respectively on Actinistia, Cladistia, Elopomorpha, and Clupeomorpha, at MNHN, Paris.

Museum der Universitaet Zuerich (Heinz Furrer).

Since the middle of the last century, fossil vertebrates have been collected in the area, not only as a by-product of commercial mining works, but during paleontological excavations supported by various scientific entities, both Italian and Swiss. About 100 paleontological campaigns have been officially carried on: to the thousands of specimens collected during this field work, we must add material found by private collectors or during mining activity, which stopped a few years after World War II. This War had a very bad effect also on the Besano-Monte San Giorgio fossils as the Milano Museum was bombed and almost all its specimens were destroyed. Middle Triassic fishes have not been much studied in the past; only Brough published a good monograph: in the last 15 years there has been a reappraisal and now we are working intensively on this ichthyofauna. The main results are related to - (1) The radiation of advanced basal actinopterygians, the so-called subholosteans, and the presence of several basal neopterygians, most of them still in need of a modern description. These studies are fundamental to understand the phylogenetic relationships of the fishes, work that has not yet been done. (2) The paleoenvironment. The restoration points to a shallow environment, usually marine, which can be possibly related to the great burst in actinopterygian variability and/or rapid evolution.

This suggested to us that we devote part of this meeting to the interrelationships between the paleoenvironment and the fish faunas to try to understand if there are paleoenvironments that may favour biodiversity and evolution. Salinity, depth of the water, kind of bottom of the basins, distance from the coast - how can these characters influence the paleocommunities? How are interrelationships between the fish species influenced by the paleoenvironment? The Triassic seems to be a crucial period for the fishes, like the Late Cretaceous: is it just because these main fossiliferous sites represented peculiar paleoenvironments or because evolutionary



The
Mesozoic Fishes
Home Page
on the
World Wide Web

is at:

<http://www.biology.ualberta.ca/wilson.hp/mesofish.html>

Add a link to your personal or museum's home page, or to a file that you are allowing others to download by sending us its WWW address.

New design for the web site:

The Mesozoic Fishes Home Page was re-designed this year. Let us know if you experience problems with it. You can now submit [membership/news items](#) and [publication citations](#) via web forms.

forces were ready to accelerate?

However, as in the two previous meetings, the main goal of this third one will be morphological studies and systematics of fish groups. New descriptions, redescrptions, and acid preparation, when possible, have greatly improved the available details during recent years, as shown by the results of the first two meetings. We hope to have plenty of interesting contributions devoted to this goal. Only through a good knowledge of individual species it is possible to render phylogenetic relationships more sound.

We all hope that this meeting will throw new

light on all these aspects of our beloved fossil fishes.

As for the previous two meetings, we will have a proceedings volume edited by Gloria Arratia and Andrea Tintori. You all are invited to prepare and have ready your important manuscripts at the time of the meeting (please, follow the presentation of Mesozoic Fishes 2).

LOGISTICS

The Serpiano resort is in a wonderful position on the Monte San Giorgio in Switzerland, looking toward Ceresio Lake and the Alps. The locality is easily reached from the Milano-Malpensa and Lugano-Agno airports by bus. However, we will try to organise special shuttles from the airports to the hotel. Visits to the various Monte San Giorgio-Besano fossiliferous localities are possible, being all a very short distance from the hotel, without any additional expenses. The hotel price will be about 110 US\$ per day, INCLUDING everything, *eg.*, room, food, swimming pool, symposium rooms, coffee breaks, etc. This will allow us to keep the meeting fee low, no more than 100 US\$. Since Serpiano is very close to Milano, Bergamo, Lugano, and Zurich, it is possible to organize trips for people interested in visiting the fish collections housed in those museums.

If you need a special invitation and/or financial support, please let us know as soon as possible. Remember to have a visa, if you need one, for both Switzerland and Italy, as we will move across the border to see the fossiliferous sites.

Schedule

The registration form must be sent before June 30, 2000. The second circular will be forwarded in the fall of 2000 with more detailed information regarding the actual dates of the meeting, tentatively August 26-31, 2001, and the deadlines for fee payment and abstract submission.

Registration forms, mail, and inquiries should be sent (please, when possible, use email) to:

Prof. Andrea Tintori
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Università degli Studi di Milano
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fax +39.02.70638261
email: <andrea.tintori@unimi.it>

REGISTRATION FORM

Please send the following information by email (if possible) before June 30, 2000:

FAMILY NAME.....

FIRST NAME.....

INSTITUTION.....

ADDRESS.....

CITY.....ZIP.....

COUNTRY.....

FAX.....

E-MAIL.....

Please underline as appropriate:

Do you wish to present an oral communication?

YES NO

Provisional title (please add eventual co-authors names)
.....
.....

Communications must last 20 minutes as a maximum, plus 10 min. for discussion.

Do you wish to present a poster?

YES NO

Provisional title (please add eventual co-authors names)
.....
.....

Poster size cm 70x100. ■

Mesozoic Fish Tales: News from Readers

NEW MEMBERS:

Alvarado-Ortega, Jesús, Ticomac 90, Barrio San Ignacio, Iztapalapa, D.F. C.P. 0900, México.
Phone: (01) 5 622 42 80, *Fax:* (01) 5 622 43 18,
Email: brujaayneron@hotmail.com

I am a student of paleoichthyology at the Universidad Nacional Autónoma de México, working on the fossil fishes from the Tlayua quarries, mainly on the Ichthyodectiformes and teleost records from this locality.

Chen, Dr. Pingfu. Associate Professor, Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, P. O. Box 643, Beijing 100044, China. *Phone:* +86-10-68935211, *Fax:* +86-10-68337001, *Email:* chenpf@public.east.cn.net

I am working on Cenozoic fishes with Prof. Dr. Mee-mann Chang, mostly specializing on cyprinids. I am also interested in taphonomy, evolution, biogeography, and taxonomy.

Maisch, Dr. Michael W., Institut und Museum für Geologie und Palaeontologie, Sigwartstraße 10, D-72076 Tübingen, Germany *Email:* museum.geol.pal@uni-tuebingen.de

Although mainly a reptile specialist, I have worked on Palaeozoic and Mesozoic fishes in the past and currently have a project going on the Upper Cretaceous teleosts from northern Germany.

Mirande, J. M. Sante Fe 768, S. m. de Tucumán, Tucumán, Argentina. *Phone:* 00543814215111 *Email:* mcmirande@topmail.com.ar

A student of biology, I am researching extant fishes, but I am interested in fossil fishes, too.

Rindone, A. Conca DOro, Le Serre - C, 98168, Messina, Italy. *Phone:* 090-356162 *Email:* rindone.me@tin.it

I am interested in Cretaceous fishes.

Robinson, Dr. Henry W., Southern Arkansas University, P. O. Box 9354, Magnolia, Arkansas, 71754-9354 USA *Phone:* (870) 235-4273, *Fax:* (870) 235-5005, *Email:* hwrobison@saumag.edu

I have been fascinated by Mesozoic fishes and wish to stay current and abreast of developing research on these fascinating fishes.

Sullivan, John P. Dept. of Neurobiology and Behavior, W263 Mudd Hall, Cornell University, Ithaca, New York 14853 USA. *Phone:* (607) 254-4384, *Fax:* (607) 254-4308, *Email:*

The Compleat Mesoangler

is edited and published by Mark V. H. Wilson. *TCM* is mailed to more than 190 people in 25 Countries. To join the list or to update your entry, submit a Mesozoic Fish Tales item:

- research interests, address changes
- news from lab or reports of fieldwork
- meeting announcements
- hints or questions on techniques or specimens
- photos of Mesozoic fishes, localities, field parties, meetings, researchers, etc.
- employment & grad school opportunities available or needed
- publications (since 1992, not listed before; reprints are greatly appreciated)

Send to:

- e-mail: mark.wilson@ualberta.ca
- FAX: 1-780-492-9234
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Dept. of Biological Sciences
University of Alberta
Edmonton, Alberta T6G 2E9
CANADA

Next Deadline October 31, 2000

Optional contribution to defray expenses of production and mailing: \$5. U.S. per year.

js151@cornell.edu; *URL:*
<http://hypopomus.bio.cornell.edu>

I am currently working on a molecular phylogenetic study of osteoglossomorph fishes (the extant ones, obviously) using mitochondrial and nuclear markers. This work grew out of a project confined to the mormyroid fishes of Africa. I am interested in comparing our results to those derived from cladistic studies of morphological characters in living and fossil osteoglossomorphs.

Trautwein, C. M., U.S. Geological Survey, Earth Resources Observation Systems Data Center, Sioux Falls, South Dakota 57198-0001 USA *Phone:* (605) 594-6015, *Fax:* (605) 594-6259 *Email:* trautwein@usgs.gov

Zachariades, Nick 34 Fairlie Park, Ringwood, Hampshire, England, BH24 1TU United Kingdom *Phone:* 01425 479795, *Email:*

nzachariades@LineOne.net

Interests: research on Jurassic and Cretaceous fossil fishes.

NEW EMAIL ADDRESS:

Johns, Marji, Pacific PaleoQuest. P. O. Box 220, Brentwood Bay, British Columbia V8M 1R3 CANADA *Phone*: (250) 652-8047, *Fax*: (250) 652-8049 *Email*: johns@telus.net

ERRATUM:

This note intends to correct the figures of the paper The Mesozoic Record of Osteichthyan Fishes from Spain, by F. J. Poyato-Ariza, A. D. Buscalioni, and J. Cartanyà IN: Arratia, G., and Schultze, H.-P. (editors) Mesozoic Fishes 2 - Systematics and Fossil Record. Verlag Dr. Friedrich Pfeil, München, Germany, p. 505-533.

On Figure 1, where it reads 4-Santa Cruz de Yanguas, it should read 5-Odén. On Figure 3, where it reads 14-Calve it should read 14-Galve, and locality 13-Alcaine is missing.

Dr. Francisco José Poyato Ariza, Universidad Autónoma de Madrid, España.

OBITUARY:

Dear friends and colleagues,

I am saddened to have to inform you that Dr. Leonid Sergeivich Glickman died last night, January 31, 2000 after a short illness. He was an expert in fossil sharks, one of the founders of modern paleoichthyology.

A. O. Averianov

MEETING:

Workshop on Coelacanth Research and Conservation

The Workshop on Global Priorities for Coelacanth Research and Conservation in the 21st Century will be convened from 23-27 October 2000 at the Bali International Convention Center (BICC), in Denpasar, Indonesia. The workshop is scheduled as a mini-symposium of the Ninth International Coral Reef Symposium (9ICRS). Information on the ICRS is available on the web at: <http://www.nova.edu/ocean/9icrs>
Darren Naish; Palaeobiology Research Group; School of Earth, Environmental & Physical Sciences; University of Portsmouth; Burnaby

Building, Burnaby Road; Portsmouth, England; PO1 3QL United Kingdom. *Phone*: 01703 446718, *Email*: darren.naish@port.ac.uk, *URL*: <http://www.naish-zoology.com>

NEWS FOR EUROPEAN WORKERS:

Dear European Colleagues,

EC provides some facilities to access biological collections in some large museums through Europe (sorry for scientists of other countries). For the MNHN in Paris, this programme is called European Community TMR programme "Access to Large Scale Facilities;"-"PARSYST" Access to Systematics collections, Museum National d'Histoire Naturelle, Paris, France. The programme is available for Botanists, Zoologists, Paleontologists, and Environmental Biologists, from the European Community, the Associated States (Iceland, Liechtenstein, Norway) and Israel for research projects involving access to the Paris Museum Systematics collections.

Daniel Goujet - Paleontology (goujet@mnhn.fr) is the coordinator of the programme.

François Bouvier - International Affairs (bouvier@mnhn.fr) is in charge of the administrative aspects of the travel and the stay.

After acceptance of your project, assistants can help you to prepare your visit and solve technical problems during and at the end of your stay (computers, optical material, entering result data in collection databases). Note that all the biological collections in the MNHN may be visited.

Application forms and information are available on the Web: <http://www.mnhn.fr/progsc/>
Fax: +33 1 40 79 35 80

NEWS FROM ITALY:

Prof. Andrea Tintori, Università degli Studi di Milano, reports that in the last year new Norian sites have been discovered. These sites are somewhat older than the well known typical Zorzino Limestone ones and yield a number of new genera and species, among them the most primitive pycnodonts. Other new localities are from the Anisian of the Dolomites Mountains, where a few fishes have been found in a strongly freshwater-influenced environment.

NEWS FROM FRANCE

We would like to present the four students working on Mesozoic fishes at the Museum of Natural History of Paris (please see cover photo). Gaël Clement, Didier B. Dutheil, Arnaud Filleul and René Zaragüeta are Phd students, doing their thesis respectively on Coelacanth, Cladistia, Elopomorpha, and Clupeomorpha. If students or researchers from abroad wish to come to France, it would be a pleasure for us to be their hosts. We are trying to improve the exchange between researchers and we organize monthly conferences about systematics. We are also finishing a new web site about fish systematics. We would appreciate a lot to get contact with people interested in fishes. If you want to discuss about fossils, cladistics, fishes (or if you want to go fishing in France) do not hesitate to contact us.

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rzeb@mnhn.fr



Squish Fisch Fiche: Recent Publications

Applegate, S. P. 1999. Recent advances in our knowledge of the Lagerstätten that occurs in the Tlayua quarries near Tepexi de Rodriguez, Puebla, Mexico. Third International Symposium on Lithographic Limestones, Bergamo, Italy - September 1-5, 1999. 136 pp., Rivista del Museo Civico di Scienze Naturali "Enrico Caffi." Supplemento al Vol. 20:9-11.

Arratia, G. 1999. New Jurassic teleostean fishes from the Late Jurassic of Bavaria. Third International Symposium on Lithographic Limestones, Bergamo, Italy - September 1-5, 1999. 136 pp., Rivista del Museo Civico di Scienze Naturali "Enrico Caffi." Supplemento al Vol. 20:13-15.

Arratia, G., and Schultze, H.-P. 1999.

Semionotiform fish from the Upper Jurassic of Tendaguru (Tanzania). Mitt. Mus. Nat. kd. Berl., Geowiss. Reihe **2**: 135-153.

Averianov, A. O. 1991. A new species of the genus *Ischyodus* from the Campanian of southern Kazakhstan [in Russian]. Izvestiya AN Kazakhskoi SSR, seriya geologicheskaya **1991(1)**: 32-34.

Averianov, A. 1996. Lev Aleksandrovich Nessov (1947-1995). Russian Journal of Herpetology **3(1)**: 105-106.

Averianov, A. O. 1997. Additions to the Selachian fauna of the Russian Cretaceous. 1. A new species of *Protosqualus* Cappetta, 1977 (Chondrichthyes: Squalidae). Zoosystematica Rossica **5(2)**: 319-320.

Averianov, A. O. 1997. Additions to the Selachian fauna of the Russian Cretaceous. 2. A new species of *Paracorax* Cappetta, 1977 (Chondrichthyes: Anacoracidae). Zoosystematica Rossica **6(1/2)**: 315-316.

Averianov, A. O. 1997. A rare discovery of the vomerine tooth plate of elephant fish (Holocephali, Callorhynchidae) from the Upper Cretaceous of Russia [in Russian]. Paleontological Journal **1997(1)**: 78-80.

Averianov, A., and Popov, E. 1995. A new species of chimaeroid fish from the Upper Cretaceous of the Saratov Region, Russia. Palaeontology **38(3)**: 659-664.

Belouze, A., and Gayet, M. 1999. First occurrence of simultaneous presence of complete pectoral girdle and pelvic fins in Anguilliformes from the Cretaceous of Lebanon. C.R. Acad. Sci. Paris, Sciences de la Terre et des Planètes/Earth & Planetary Sciences **329**: 683-688.

Bemis, W. E., and Grande, L. 1999. Development of the median fins of the North American paddlefish (*Polyodon spathula*), and a reevaluation of the lateral fin-fold hypothesis. pp. 41-68. IN: Arratia, G., Schultze, H.-P. (eds). Mesozoic Fishes 2 Systematics and Fossil Record. Proceedings of the International Meeting Buckow, 1997. München, Deutschland,

Verlag Dr. Friedrich Pfeil. 604 pp.

Benton, M.J., Bouaziz, S., Buffetaut, E., Martill, D., Ouaja, M., Soussi, M., and Trueman, C. 2000. Dinosaurs and other fossil vertebrates from fluvial deposits in the Lower Cretaceous of southern Tunisia. *Palaeogeography, Palaeoclimatology, Palaeoecology* 157(3-4): 227-246.

Brito, P. M. 1998. A 'redescoberta' do celacanto. *Ciencia Hoje* 125(145): 64-65.

Brito, P. M. 1999. The caudal skeleton of aspidorhynchids (Actinopterygii, Halecostomi): phylogenetic implications. pp. 249-264. *IN:* Arratia, G., Schultze, H.-P. (eds). *Mesozoic Fishes 2 - Systematics and Fossil Record*. München, Germany, Verlag Dr. Friedrich Pfeil. 604 pp.

Brito, P. M. 1999. Description of *Aspidorhynchus arawaki* from the Late Jurassic of Cuba (Actinopterygii: Halecostomi). pp. 239-248. *IN:* Arratia, G., Schultze, H.-P. (eds). *Mesozoic Fishes 2 - Systematics and Fossil Record*. München, Germany, Verlag Dr. Friedrich Pfeil. 604 pp.

Brito, P. M., and Martill, D. M. 1999. Discovery of a juvenile coelacanth in the Lower Cretaceous, Crato Formation, Northeastern Brazil. *Cybio* 23(3): 311-314.

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Bürgin, T. 1999. New actinopterygian fishes (Osteichthyes) from the Lower Meride Limestones (Lower Ladinian) of Aqua del Ghiffo (Monte San Giorgio, southern Switzerland). Third International Symposium on Lithographic Limestones, Bergamo, Italy - September 1-5, 1999. 136 pp., *Rivista del Museo Civico di Scienze Naturali "Enrico Caffi."* Supplemento al Vol. 20:57-62.

Chanet, B. 1997. Plethodid remains (Osteichthyes: Teleostei *incertae sedis*) from the basal Albian of the Vocontian basin (S.E.

Mesozoic Fishes 2: Systematics and Fossil Record

Proceedings of the international meeting in
Buckow, Germany, 1997.

Arratia, G., Schultze, H.-P. (Editors). 1999.
München, Deutschland, Verlag Dr.
Friedrich Pfeil. 604 pp.

Based on papers presented at the Proceedings of the international meeting on Mesozoic Fishes, Buckow, Germany, in 1997. Phylogenetic relationships of chondrichthyans and actinopterygians are the central issue. In addition, attention is given to questions of morphology and to the Mesozoic fossil record in a variety of countries. The new information is contained in 31 papers. 604 pp., 303 figs., 30 tables, 4 plates. 24.5 X 17.3 cm. Bound copies: ISBN 3-931516-48-2. USA \$182.50.

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France). *N. Jb. Geol. Paläont. Mh.* 11: 696-702.

Cuny, G. 1999. Enameloid microstructure in primitive neoselachian sharks. p. 7. Cost B8 Odontogenesis WG1 - Working Group 1 - Meeting "Evolution." September 24-25, 1999, Gent, Belgium, Cost.

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Dalla Vecchia, F. M. and Venturini, S. 1999. The Middle Cenomanian Lagerstätte of Al Nammoura (Kesrouâne Caza, N. Lebanon. Third International Symposium on Lithographic Limestones Bergamo, Italy - September 1-5, 1999. 136 pp., Rivista del Museo Civico di Scienze Naturali "Enrico Caffi." Supplemento al Vol. 20:75-77.

Dutheil, D. B. 1999. An overview of the freshwater fish fauna from the Kem Kem beds (Late Cretaceous: Cenomanian) of southeastern Morocco. pp. 553-563. *IN: Mesozoic Fishes 2 - Systematics and Fossil Record* Proceedings of the International Meeting, Buckow, 1997. Arratia, G., and Schultze, Hans-Peter. München, Deutschland, Verlag Dr. Friedrich Pfeil. 604 pp.

Fielitz, C., Stewart, J. D., and Wiffen, J. 1999. †*Aethocephalichthys hyainarhinos* gen. et sp. nov., a new and enigmatic Late Cretaceous actinopterygian from North America and New Zealand. pp. 95-106. *IN: Mesozoic Fishes 2 - Systematics and Fossil Record*. Proceedings of the International Meeting, Buckow, 1997. Arratia, G., and Schultze, Hans-Peter (eds). München, Deutschland, Verlag Dr. Friedrich Pfeil: 604 pp.

Fraser, N. C. and Grimaldi, A. 1999. A significant Late Triassic Lagerstätte from Virginia, U.S.A. Third International Symposium on Lithographic Limestones Bergamo, Italy - September 1-5, 1999. 136 pp., Rivista del Museo Civico di Scienze Naturali "Enrico Caffi." Supplemento al Vol. 20:79-84.

Furrer, H. 1999. New excavations in the marine Middle Triassic fossil-Lagerstätte at Monte San Giorgio (Canton Ticino, Southern Switzerland) and the Ducan Mountains near Davos (Canton Graubünden, Eastern Switzerland). Third International Symposium on Lithographic Limestones, Bergamo, Italy - September 1-5, 1999.

136 pp., Rivista del Museo Civico di Scienze Naturali "Enrico Caffi." Supplemento al Vol. 20:85-88.

Gayet, M., and Otero, O. 1999. Analyse de la paléodiversification des siluriformes (Osteichthyes, Teleostei, Ostariophysi). *Geobios* 32(2): 235-246.

Glickman, L. S., and Averianov, A. O. 1998. Evolution of the Cretaceous Lamnoid sharks of the genus *Eostriatolamia*. *Paleontological Journal* 32(4): 376-384.

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Goodwin, M. B., Clemens, W. A., Hutchinson, J. H., Wood, C. B., Zavada, M. S., Kemp, A., Duffin, C. J., and Schaff, C. R. 1999. Mesozoic continental vertebrates with associated palynostratigraphic dates from the northwestern Ethiopian plateau. *Journal of Vertebrate Paleontology* 19(4): 728-741.

Goto, M. 1975. New find of the Permian and Triassic fish fossil in Japan. - On the dermal denticles and teeth of fishes discovered from Karasawa area southeast Asia Mountains. *Earth Sciences (Chikyu Kagaska)* 29(2): 72-74.

Goto, M. 1988. Development of dermal tooth and jaw tooth in sharks and phylogeny of hard tissues in vertebrates. pp. 219-246. *IN: Biomineralization and phylogeny of marine organisms*. M. Omori, S. Suga and M. Goto.

Mesozoic Fishes III (2001)

Systematics, Paleoenvironments and Biodiversity

Serpiano, Switzerland

Meeting Organizers:

Andrea Tintori <andrea.tintori@unimi.it>

Markus Felber

Heinz Furrer

Tokyo, Japan, Tokai University Press.

Goto, M., Hitomi, T., Yamasawa, T. 2000. On two teeth of *Chlamydoselachus* sp. from the Himenoura Group (Upper Cretaceous) in Kumamoto Prefecture and from the Tomioka Group (Miocene, Tertiary) in Gunma Prefecture, Japan Abstract No. 53. p. 75. *IN: Abstracts of the 2000 Annual Meeting of the Palaeontological Society of Japan. January 28-30, 2000, Waseda, Japan, The Palaeontological Society of Japan.*

Grande, L., and Bemis, W. E. 1999. Historical biogeography and historical paleoecology of Amiidae and other halecomorph fishes. pp. 413-424. *IN: Mesozoic Fishes 2 - Systematics and Fossil Record. Proceedings of the International Meeting, Buckow, 1997. Arratia, G., and Schultze, Hans-Peter (eds). München, Deutschland, Verlag Dr. Friedrich Pfeil. 604 pp.*

Grande, L., and Grande, T. 1999. A new species of †*Notogoneus* (Teleostei: Gonorynchidae) from the Upper Cretaceous Two Medicine Formation of Montana, and the poor Cretaceous record of freshwater fishes from North America. *Journal of Vertebrate Paleontology* **19**(4): 612-622.

Grande, T., and Poyato-Ariza, F. J. 1999. Phylogenetic relationships of fossil and recent gonorynchiform fishes (Teleostei: Ostariophysi). *Zoological Journal of the Linnean Society* **123**: 197-238.

Heidtke, U. H. J. 1998. Revision der Gattung *Orthacantus* Agassiz 1843 (Chondrichthyes: Xenacanthida). *Paläontologische Zeitschrift* **72**(1/2): 135-147.

Hilton, E. J., and Bemis, W. E. 1999. Skeletal variation in shortnose sturgeon (*Acipenser brevirostrum*) from the Connecticut River: implications for comparative osteological studies of fossil and living fishes. pp. 69-94. *IN: Mesozoic Fishes 2 - Systematics and Fossil Record. Arratia, G., and H.-P. Schultze. München, Germany, Verlag Dr. Friedrich Pfeil. 604 pp.*

Kriwet, J. 1998. Late Jurassic elasmobranch and actinopterygian fishes from Portugal and Spain. *Cuadernos de Geología Ibérica* **24**: 241-260.

Kriwet, J. 1999. Pycnodont fishes (Neopterygii, †Pycnodontiformes) from the Lower Cretaceous of Uña (E-Spain) with comments on branchial teeth in pycnodontid fishes. pp. 215-238. *IN: Mesozoic Fishes 2 - Systematics and Fossil Record. Proceedings of the International Meeting, Buckow, 1997. G. Arratia, and Schultze, Hans-Peter. München, Deutschland, Verlag Dr. Friedrich Pfeil: 604 pp.*

Lombardi, C. 1999. Fossil fishes from the Besano Formation (Middle Triassic, Northern Italy) in the collection of Museo Civico di Storia Naturale de Milano: preliminary results. 1) Composition of the fauna. Third International Symposium on Lithographic Limestones, Bergamo, Italy - September 1-5, 1999. 136 pp., *Rivista del Museo Civico di Scienze Naturali "Enrico Caffi."* Supplemento al Vol. **20**:93-96.

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