

IN MEMORIAM

Obituary

Juan Antonio Moreno García
1952–2004

Juan Antonio Moreno was born in Salamanca, Spain, on 24 May 1952, and he was the middling of three siblings, Concha, the older, and Carlos, the younger. He died on 9 November 2004 in the Hospital of Segovia, Spain, without hardly suffering, when the forces of his already excessively damaged organism definitively abandoned him.

Juan Antonio was always a brilliant student who took all his primary and secondary schooling with scholarships of the State. His extensive and multidisciplinary scientific activity goes back to the beginning of the 1970s, when he was still a student at the Faculty of Biological Sciences of Complutense University of Madrid (UCM). Between 1973 and 1976, he carried out such tasks as the classification and cataloguing of the entomologic collection of the group "Topete" in Madrid, dependent of the National Park of Doñana, he investigated Coleoptera Carabidae in the Chair of Invertebrates Arthropods, and worked on the preparation and assembly of the first skeletons of the Chair of Vertebrates Zoology Museum. In 1976, he graduated in biological sciences, in the UCM. It was then that he began to study Chondrichthyans, carrying out multitude of fieldwork at fish markets, diving and spending much time on board "marrajas" (fishing ships that catch sharks, basically makos, "marrajos", with longlines). In 1977, when completing the obligatory military service in Tarifa and Algeciras, he made a superb film on sharks for the Infantry Regiment of *Extremadura 15* of the Spanish Army. Regarding this work, he always remembered his face to face encounter with a great mako while diving. During 1978 and 1982, he alternated his work in the preparation of his postgraduate exams with other activities like collaborating with the Spanish Institute of Oceanography of Santander in biometry topics and fishing aspects of the species captured with trawl and seine gears, or collaborating with Dr. W.E. Reif from the Institute and Museum of Geology and Palaeontology of Tübingen in studies of comparative anatomy of Chondrichthyans both fossils and living. In 1981, he described a new species, *Carcharhinus acarenatus*, which some researchers from the Anglo-Saxon sphere insisted in nominating as synonymy of *Carcharhinus brachyurus*, without not even revising the holotype and the paratypes of the new species deposited in the UCM to check the distinctive diagnostic characters. In 1982, he obtained his doctor's degree on the basis of his shark project: *Revision of the genus Carcharhinus of the Northeastern Atlantic and Western Mediterranean*, worthy of the maximum academic qualification. Between 1982 and 1984 he took

part in several campaigns to trap micromammals in order to get specimens for the studies and collections of the Chair of Vertebrates and in successive bird ringing campaigns. He was in charge of the classification and updating of the Ichthyological Collection of this Chair, to which he donated his own collection of jaws, skins, heads and fetuses of sharks, and he led four shark projects. In 1983, the Iberian Ichthyological Society was founded. In 1984, when returning from the first General Meeting of the Catalan Ichthyological and Herpetological Society, which was held in Sitges (near Barcelona), a road accident changed his life forever and left him "beached in dry dike", as he used to say. All his projects, professional as well as personal (his marriage failed soon after the accident), were left on that fateful motorway. Juan Antonio spent much time in the Tetraplegics Hospital of Toledo, and had to return frequently to it due to the seriousness of his health. He was forced to face a new situation, and it was very hard. He was only 32 years old, and until then his activities had been almost frantic. In spite of a series of setbacks and moments of desperation, however, he continued being as passionate as always in everything he made, and always demonstrated admirable will and tenacity. In 1991 he obtained his doctorate in biology with the thesis: *Lamnidae and Alopiidae (Chondrichthyes, Euselachii) of the Northeastern Atlantic and Western Mediterranean*, mentored by Dr. Francisco Bernis, one of the most noted Spanish biologists. This achievement is one of the most remarkable in Juan Antonio's life, considering that by then he had been anchored to a wheelchair for seven years. During these seven years he collaborated occasionally with Dr. J. Cassey, of the NOAA, in the identification and taxonomy of deep-sea sharks from the Northwestern Atlantic, directed the Group of Ichthyological Investigation of the Chair of Vertebrates (UCM), and supervised different researches on sharks. Regarding his academic activity, Juan Antonio was attributed to the Chair of Zoology of the UCM as investigator during the 1980–1994 period. He was deeply engaged in the subjects of fish migrations, biology of sharks and fishing gears, and in the study of pelagic shark landings in the Atlantic Southern Spanish coast. In 1993 was named Honorary Collaborator of the Chair of Vertebrates from the Faculty of Biological Sciences of the UCM. In spite of this career, Juan Antonio was never a person to please the offices of the Faculty. He always preferred his independence and free action, although his posture was not well understood by some of his colleagues and even pupils, which was very painful for him and traumatized him deeply. His relationship with the University finished quite bitterly, "after 17 years of autonomous work", and "trying to take the practice of teaching with my Aristotelian method of learning", as stated by him. Autonomous, because he never belonged to the payroll of investigators of the Faculty, something very frequent in the Spanish



Juan Antonio Moreno with a taxidermied specimen of *Carcharhinus acarenatus*, the shark species he described in 1981. (Photo: J. A. Moreno)

Juan Antonio Moreno z nagačenim primerkom *Carcharhinus acarenatus*, morskega psa, ki ga je opisal leta 1981. (Foto: J. A. Moreno)

University system that prolongs the stay of graduates and doctors in the Centres for years through economically insufficient scholarships, or even without any type of economic assignment. With his departure, the Chair of Vertebrates abandoned the research in Elasmobranchs. This academic rupture, however, gave way to the birth of the Shark Ichthyological Research Group (GIIT), which he founded in 1994.

Another field that highly interested Juan Antonio Moreno was the exploitation of sharks. He gained much experience aboard fishing ships and at fish markets, seeing how hundreds of specimens were wasted daily through the sharks' very scarce utilization (he was strongly opposed to the practice of "finning"). This topic worried him so much that he ended up organizing meetings with Shipowners and Masters from the Fish Guild of Algeciras (one of the fish ports with more shark landings in Spain) in order to analyse the problem of the longlining and to elaborate a plan of improvement in the utilization of the biomass captured by these ships. An aspect in which he was highly interested was the tanning of shark skin for its use in fashion industry. He maintained the formula of the industrial process secretly, and believed firmly that this kind of skin could reach high prices on the market and that "marrajeros" (the men who fish sharks) could earn more even if catching fewer specimens.

But Juan Antonio was not only the pioneer shark investigator in Spain and Europe. He was also one of the best ever wildlife illustrators, if not the best, in Spain. His serious limitations, however, did not prevent him to continue with his artistic vocation after the accident. If he was unable to draw with his own hands, the computer would do it for him. He took a course in Design of

Graphic Arts by Computer, which eventually allowed him to continue his work in this field. The course proved to be very useful indeed, for now we can enjoy some of the results in his *Guía de los tiburones del Atlántico Nororiental y Mediterráneo* (Guide of sharks of the North-eastern Atlantic and the Mediterranean), published in 1995 by Pirámide Publishing and recently reedited by Omega Publishing – the reedition that took him much strength and that he could not even see printed.

In 1995, Juan Antonio left his habitual residence in Móstoles, near Madrid, to move to Villacastín, a small town near Segovia, for health reasons. There, he remained confined until his death. He had fought a battle, and fortunately he had did not fought it alone. Isabel, his mate during the last 18 years, had always been at his side. A strong and valiant woman that opted for a difficult and tortuous way, that of a complex coexistence with the person who depended completely on her, and to whom we should thank to make his life a little easier. Now Juan Antonio rests, at last, as he wanted, although in our selfishness we will find it difficult to overcome his absence.

The scientific community has lost one of the greatest ichthyologists and shark specialists. His name, however, will live forever in the field of shark research and his publications will remain as references for future works on sharks inhabiting the Mediterranean Sea and the Iberian waters. We will remember him as an honest man, with a deep knowledge of shark biology, and as a person who was always ready to support his colleagues in any interesting project by even providing his own data, the result of his great experience in this field.

Rest in peace, Juan Antonio.



Juan Antonio Moreno giving a tender kiss to a specimen of *C. acarenatus*. (Photo: J. A. Moreno)

Juan Antonio Moreno nežno poljublja primerek *C. acarenatus*. (Foto: J. A. Moreno)

PUBLICATIONS

- Moreno, J. A. (1981):** La velocidad en los peces. *Quercus*, 1, 29–30.
- Moreno, J. A. (1982):** Dónde observar a los peces. *Quercus*, 2, 32–33.
- Moreno, J. A. (1982):** La reproducción en los tiburones (1ª Parte). *Quercus*, 7, 28–30.
- Moreno, J. A. (1983):** La reproducción en los tiburones (2ª Parte). *Quercus*, 8, 22–25.
- Moreno, J. A. (1983):** Tiburón, un pez con mala fama. *Natura*, 4, 35–40.
- Moreno, J. A. (1983):** Diccionario de especies amenazadas de extinción. Peces de río. *Natura*, 5, 41–44.
- Moreno, J. A. (1983):** Diccionario de especies amenazadas de extinción. Peces de mar. *Natura*, 6, 41–44.
- Moreno, J. A. (1985):** Notas sobre la captura de *Ophichthus rufus* (Rafinesque, 1810) y *Ophisaurus serpens* (Linnaeus, 1758) en localidades nuevas del Atlántico y Mediterráneo español. *Butll. Soc. Cat. Ict. Herp.*, 10, 4–7.
- Moreno, J. A. (1985):** Importancia de las pesquerías de tiburón en el Sur de España. *Butll. Soc. Cat. Ict. Herp.*, 10, 14–21.
- Moreno, J. A. (1987):** Tiburones, una leyenda con millones de años. *El camping y su mundo*, 20, 84–89.
- Moreno, J. A. (1987):** Tiburones, depredadores especializados. *El camping y su mundo*, 21, 79–81.
- Moreno, J. A. (1987):** "JAQUETONES" Tiburones del género *Carcharhinus* del Atlántico Nororiental y Mediterráneo Occidental. Ministerio de Agricultura Pesca y Alimentación, 205 pp.
- Moreno, J. A. (1988):** Criaturas marinas peligrosas. *El camping y su mundo*, p. 110–118.
- Moreno, J. A. (1991):** Lamnidae y Alopiidae (Chondrichthyes, Euselachii) del Atlántico Oriental y Mediterráneo Occidental: Sistemática, biología y aspectos pesqueros. Tesis doctoral inédita, Universidad Complutense, Madrid.
- Moreno, J. A. (1991):** Los tiburones en la ecología marina. *Diversidad Biológica – Biological Diversity*. Fundación Ramón Areces, Madrid, p. 293–294.
- Moreno, J. A. (1992):** Sobre la presencia de *Dinemoura producta* Müller, 1785 (Crustacea Copepoda: Pandaridae) en *Isurus oxyrinchus* (Chondrichthyes: Lamnidae) en aguas del Mar Mediterráneo. *Parasitología en el Suroeste de Europa*. J. Aguilar, S. L. Valencia.
- Moreno, J. A. (1992):** *Pandarus sp.* Leach, 1816 (Crustacea Copepoda: Pandaridae) ectoparásito de *Prionace glauca* (Chondrichthyes: Carcharhinidae) en aguas del Mediterráneo suroccidental. *Parasitología en el Suroeste de Europa*. J. Aguilar, S. L. Valencia.
- Moreno, J. A. (1994):** Marrajo, el gran tiburón ibérico. *Quercus*, 10, 16–17.



Juan Antonio Moreno with his friends Joan Barrull and Isabel Mate, in his house in Villacastín, where his health problems confined him during the last ten years of his life. (Photo: J. Barrull and I. Mate)

Juan Antonio Moreno s svojima prijateljema Joanom Barrullom in Isabel Mate na svojem domu v Villacastínu, h kateremu je bil zaradi hudih zdravstvenih težav priklenjen zadnjih deset let svojega življenja. (Foto: J. Barrull in I. Mate)

Moreno, J. A. (1995): Guía de los tiburones del Atlántico Nororiental y Mediterráneo. Ed. Pirámide, Madrid, 310 pp.

Moreno, J. A. (2001): TIBURÓN! Una leyenda viva. CD-Rom.

Moreno, J. A. (2001): Sirve la librea de los tiburones para distinguir especies? *Quercus*, 198, 14–17.

Moreno, J. A. (2002): Especialistas en morder. *Muy Interesante*, 256, p. 22.

Moreno, J. A. (2004): Guía de los tiburones del Atlántico Nororiental y Mediterráneo. Revised edition. Ed. Omega, Barcelona, 316 pp.

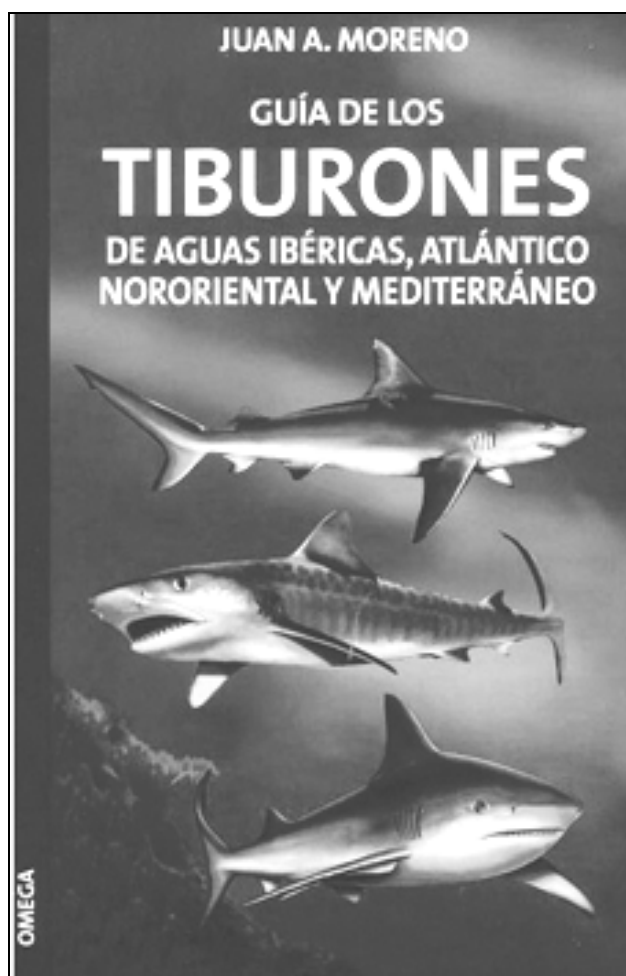
Moreno, J. A. (unpubl.): Discussion about the validity of *Carcharhinus acarenatus* Moreno, J. A & Hoyos A., 1983 as a nominal species, and notes about its distribution, general biology and distinctive taxonomic features.

Moreno, J. A. (unpubl.): Grandes tiburones de interés pesquero del Atlántico Nororiental y Mediterráneo Occidental. (LAMNIDAE y ALOPIIDAE).

Moreno, J. A. (unpubl.): Variaciones en la librea de los Chondrichthyes, Euselachii, del Atlántico Nororiental y Mediterráneo Occidental, y discusión sobre su validez como carácter taxonómico en la Sistemática.

Moreno, J. A. & E. Díaz (1985): Importancia de las pesquerías de tiburón en el Sur de España. *Butll. Soc. Cat. Ict. Herp.*, 10, 14–21.

Moreno, J. A. & A. Hoyos (1983): Première capture en eaux espagnoles et de la Méditerranée de *Carcharhinus altimus* (Springer, 1950). *Cybium*, 7(1), 65–70.



The excellent, comprehensive and accurately illustrated book on sharks of the Eastern-North Atlantic and the Mediterranean Sea written by Juan Antonio Moreno and recently republished as a revised edition by Omega Publishing, Barcelona.

Izvrstna obsežna knjiga Juana Antonia Morena z natančnimi ilustracijami morskih psov vzhodnega Severnega Atlantika, ki jo je pred kratkim revidirala in na novo izdala barcelonska založniška hiša Omega Publishing.

Moreno, J. A. & A. Hoyos (1983): *Carcharhinus acarenatus*, nov. sp., nouveau requin Carcharhinide de l'Atlantique Nororiental et de la Méditerranée Occidentale. *Cybiurn*, 7(1), 57–64.

Moreno, J. A. & J. Morón (1992): Comparative study of the genus *Isurus* (Rafinesque, 1810) with notes about its biology. Descriptive variations of Azores endemism: "Criollo Mako" (*Isurus* sp.). *Aust. J. Scient. Res.*, 43(1), 109–122.

Moreno, J. A. & J. Morón (1992): Reproductive biology, height and sizes, and fishing phenology of the Bigeye Thresher Shark: *Alopias superciliosus* (Lowe, 1839) in

the Northoriental Atlantic Ocean and the Occidental Mediterranean. *Aust. J. Scient. Res.*, 43 (1), 77–86.

Moreno, J. A., Parajúa, J. I. & J. Morón (1989): Biología reproductiva y fenología de *Alopias vulpinus* (Bonnaterre, 1788) en el Atlántico Nororiental y Mediterráneo Occidental. *Scient. Mar.*, 53(1), 37–46.

Contributions presented at meetings

Primeras Jornadas de Ictiología Ibérica, León, Spain, 1981

- Panorama actual de los tiburones en España.
- Descripción de una nueva especie de tiburón: *Carcharhinus acarenatus*.

Segundas Jornadas de Ictiología Ibérica, Barcelona, Spain, 1983

- Contribución al conocimiento de la biología y distribución del *Carcharhinus longimanus* (Poeys, 1865).
- Presencia de *Carcharhinus falciformis* (Müller & Henle, 1841) en aguas ibéricas y primer registro en el Mediterráneo.
- Contribución al conocimiento de *Torpedo marmorata* Risso, 1810.
- Morfología y biología de *Carcharhinus acarenatus*. Nueva especie descrita por el autor en 1981.
- Datos de reproducción y natalidad de *Alopias vulpinus* (Bonnaterre, 1788).
- Primer registro de *Carcharhinus amboinensis* (Müller & Henle, 1841) en aguas del Atlántico Nororiental.
- Propuesta de nominación vernácula de las catorce especies del Género *Carcharhinus* del Atlántico Nororiental y Mediterráneo Occidental registradas por el autor.
- Primer registro de *Galeocerdo cuvieri* (Perón & Lesueur, 1882) en aguas ibéricas.
- Aprovechamiento industrial del tiburón.

VI Biental de la Real Sociedad de Historia Natural, Santiago de Compostela, Spain, 1983

- Morfología y biología del Jaquetón Lobo *Carcharhinus obscurus* (LeSueur, 1818).
- Distribución, biología y breve diagnosis de *Alopias superciliosus* (Lowe, 1840).

I Reunión General Societat Catalana d'Ictiologia i Herpetologia, Sitges, Spain, 1984

- Los Jaquetones (*Carcharhinus*) del Mediterráneo Occidental y del Atlántico Ibérico-Marroquí.
- Importancia de las pesquerías de tiburón en el Sur de España.
- Nuevos registros de *Isurus paucus* Guitart Manday, 1966.
- Posibilidades del aprovechamiento industrial del tiburón.

- Notas sobre la captura de *Ophichtis rufus* (Rafinesque, 1810).

Symposium Internacional sobre Diversidad Biológica (Departamento Interuniversitario de Ecología de Madrid and ADENA), Madrid, Spain, 1989

- Importancia de los tiburones en la ecología marina.

I Congreso Internacional de las Asociaciones Sudoccidental-Europeas de Parasitología, Valencia, Spain, 1991

- Sobre la presencia de *Dinemoura producta* Müller, 1785 (Crustacea Copepoda: Pandaridae) en *Isurus oxyrinchus* (Chondrichthyes: Lamnidae) en aguas del Mar Mediterráneo.
- *Pandarus* sp. Leach, 1816 (Crustacea Copepoda: Pandaridae) ectoparásito de *Prionace glauca* (Chondrichthyes: Carcharhinidae) en aguas del Mediterráneo suroccidental.

International Scientific Conference "Sharks Down Under", Sidney, Australia, 1991

- Comparative Study of the genus *Isurus* (Rafinesque, 1810) with notes about its biology. Descriptive variations of Azores endemism: "Criollo Mako" (*Isurus* sp.).
- Discussion about the reproductive and size biology: phenology and fisheries of common thresher shark: *Alopias vulpinus* (Bonnaterre, 1788) in the North Atlantic and Occidental Mediterranean.

- Reproductive biology, weight and sizes, and fishing phenology of the bigeye thresher shark: *Alopias superciliosus* (Lowe, 1839) in the Northoriental Atlantic Ocean and the Occidental Mediterranean.

VIII Congress Societas Europaea Ichthyologorum, Oviedo, Spain, 1994

- Discussion about the validity of *Carcharhinus acarenatus* Moreno J. A. & Hoyos A., 1983 as a nominal species, and notes about its distribution, general biology and distinctive taxonomic features.
- Livery variations in the Chondrichthyes, Euselachii, from the NE Atlantic Ocean and Mediterranean Sea, and discussion about validity as taxonomic features in Systematic.
- Reproductive Biology of the Family Alopiidae: particular anatomical formations, foetal development, ovophagy, sizes biology, and reproductive ecology.
- Feeding biology and differential predatory success of *Sphyrna zygaena* (Linnaeus, 1758) from the North-Eastern Atlantic Ocean.
- Occurrence, abundance and seasonality of the Family Sphyrnidae in the North-Eastern Atlantic Ocean and the Western Mediterranean Sea.

**Joan Barrull, Isabel Mate
and Alessandro De Maddalena**