

**International symposium of middle-sized pelagic fish**  
**Sci. Mar. 59(3-4): 1995**

**FOREWORD**

**Foreword**

Carles Bas, José Juan Castro and José M<sup>a</sup> Lorenzo  
Sci. Mar. 59(3-4): 203-204

**RESEARCH ARTICLES**

**Biological characteristics of middle-sized pelagic fishes**

Adam Ben-Tuvia  
Sci. Mar. 59(3-4): 205-209

**Geographic variations in sexual maturity of the horse mackerel, *Trachurus trachurus*, in the Galician and Cantabrian shelf**

P. Abaunza, A.C. Fariña and P. Carrera  
Sci. Mar. 59(3-4): 211-222

**Infestation by larvae of *Anisakis simplex* (Nematoda: Ascaridata) in horse mackerel, *Trachurus trachurus*, and Atlantic mackerel, *Scomber scombrus*, in ICES Divisions VIIIb, VIIIc and IXa (N-NW of Spain)**

P. Abaunza, B. Villamor and J.R. Pérez  
Sci. Mar. 59(3-4): 223-233

**Population biology of the roudi escolar *Promethichthys prometheus* (Gempylidae) off the Canary Islands**

J.M. Lorenzo and J.G. Pajuelo  
Sci. Mar. 59(3-4): 235-240

**Oceanic redfish (*Sebastes mentella*) in the Irminger Sea and adjacent waters**

J. Magnusson and J.V. Magnusson

Sci. Mar. 59(3-4): 241-254

**Comparison of seasonal variability in the reproduction of Pacific sardine (*Sardinops sagax*) from Baja California Sur, Mexico, in the years 1982-1992**

J.R. Torres-Villegas, R.I. Ochoa-Báez, L. Pérez Gómez-Álvarez and G. García-Melgar

Sci. Mar. 59(3-4): 255-264

**Biology of the rough scad *Trachurus lathami*, on the southeastern coast of Brazil**

S.A. Saccardo and M. Katsuragawa

Sci. Mar. 59(3-4): 265-275

**On the sexual maturity of the bogue (*Boops boops*) (Teleostei, Sparidae) from the Portuguese coast**

L. Serrano Gordo

Sci. Mar. 59(3-4): 279-286

**Growth of the chub mackerel *Scomber japonicus* (Pisces: Scombridae) off the Canary Islands**

J.M. Lorenzo, J.G. Pajuelo and A.G. Ramos

Sci. Mar. 59(3-4): 287-291

**The impact of pelagic fish behaviour on fisheries**

T.J. Pitcher

Sci. Mar. 59(3-4): 295-306

**An investigation of the trophic role of three pelagic fishes in a tropical coastal ecosystem of the Western Gulf of Mexico, using the ECOPATH II model**

Francisco Arreguín-Sánchez and Ernesto A. Chávez

Sci. Mar. 59(3-4): 307-315

**Feeding habits of young-of-the-year greater amberjack *Seriola dumerili* (Risso, 1810) along the N/W Sicilian Coast**

F. Badalamenti, G. D'Anna, L. Lopiano, D. Scilipoti and A. Mazzola

Sci. Mar. 59(3-4): 317-323

**Feeding preferences of *Scomber japonicus* in the Canary Islands area**

J.J. Castro and A. Santana del Pino

Sci. Mar. 59(3-4): 325-333

**Toward a synthetic eco-ethology of tropical tunas**

L. Dagorn, M. Petit, J.M. Stretta, X. Bernardet and A.G. Ramos

Sci. Mar. 59(3-4): 335-346

**Ontogenetic changes in mouth structures, foraging behaviour and habitat use of *Scomber japonicus* and *Illex coindetii***

J.J. Castro and V. Hernández-García

Sci. Mar. 59(3-4): 347-355

**Seasonality and reproduction of dolphin-fish (*Coryphaena hippurus*) in the Western Mediterranean**

E. Massuti and B. Morales-Nin

Sci. Mar. 59(3-4): 357-364

**Food habits of bait-caught skipjack tuna *Katsuwonus pelamis* off the Canary Islands**

A.G. Ramos, J.M. Lorenzo and J.G. Pajuelo

Sci. Mar. 59(3-4): 365-369

**Ecological structures: expansion and replacement**

C. Bas

Sci. Mar. 59(3-4): 373-380

**Community structure of euphausiids and copepods in the distribution areas of pelagic fish larvae off the west coast of Baja California, Mexico**

J. Gómez-Gutiérrez, S. Hernández-Trujillo and G.M. Esqueda-Escarcega

Sci. Mar. 59(3-4): 381-390

**Spatial and temporal distribution of *Scomber japonicus* larvae in the Sea of Cortez (1984-1988)**

G.M. Esqueda-Escarcega

Sci. Mar. 59(3-4): 391-397

**Distribution model and association in three pelagic congeneric species (*Trachurus* spp.) present in the Iberic Mediterranean Sea**

D. Lloris and T. Moreno

Sci. Mar. 59(3-4): 399-403

**Community structure of the juvenile of coastal pelagic fish species in the Canary Islands waters**

T. Moreno and J.J. Castro

Sci. Mar. 59(3-4): 405-413

**Environmental change, regimes and middle-sized pelagic fish in the South-east Atlantic Ocean**

R.J.M. Crawford, L.J. Shannon and G. Nelson

Sci. Mar. 59(3-4): 417-426

**Relationship between herring (*Clupea harengus* L.) distribution and sea surface salinity and temperature in the northern North Sea**

C.D. Maravelias and D.G. Reid

Sci. Mar. 59(3-4): 427-438

**Temperature effect on spawning and age structure of eggs of *Sardinops sagax*, Clupeidae, during five circadian cycles in Bahia Magdalena, Baja California Sur, Mexico**

J.R. Torres-Villegas, R.I. Ochoa-Báez and M.S. Muñetón-Gómez

Sci. Mar. 59(3-4): 439-443

**An application of satellite-derived sea surface temperatures to southern bluefin tuna and albacore off Tasmania, Australia**

R. Reddy, V. Lyne, R. Gray, A. Easton and S. Clarke

Sci. Mar. 59(3-4): 445-454

**Spawning and nursery grounds of pelagic fish species in the sea-shelf off Argentina and adjacent areas**

R.P. Sánchez and J.D. Ciechomski

Sci. Mar. 59(3-4): 455-478

**Fluctuations in abundance of small and mid-size pelagics**

J. Csirke

Sci. Mar. 59(3-4): 481-492

**Presence of early life stages of *Opisthonema libertate* (Günther 1866) in Bahia Concepción, Baja California sur, Mexico (1990-1991)**

M.S. Cota Meza and M.S. Muñetón-Gómez

Sci. Mar. 59(3-4): 493-497

**Fluctuations in fish catch of middle-sized pelagic fish in the Seto Inland Sea, Japan**

H. Hashimoto, T. Shibuno, S. Ishikawa and K. Gushima

Sci. Mar. 59(3-4): 499-506

**Deterministic signals in Scottish and Irish herring (*Clupea harengus*) catches**

T. Wyatt, F. Saborido-Rey and R.G. Currie

Sci. Mar. 59(3-4): 507-513

**Middle-sized pelagic fish in the world fishery**

B. Draganik

Sci. Mar. 59(3-4): 517-525

**Reconnaissance and exploitation of the Chilean jack mackerel by the Polish fleet in 1978-1984**

B. Draganik, R. Dlugosz, J. Milosz and W.L. Borowski

Sci. Mar. 59(3-4): 527-532

**Growth and Mortality of Indian Mackerel (*Rastrelliger kanagurta*) and slender scad (*Decapterus russelli*) off the East Coast of Peninsular Malaysia**

M.I. Mansor and S. Abdullah

Sci. Mar. 59(3-4): 533-547

**Industrial catch of small coastal pelagic fish in Cameroon**

Folack Jean

Sci. Mar. 59(3-4): 549-554

**Mortality, exploitation rate and relative yield of *Rastrineobola argentea* (Pellegrin 1904) in the Winan Gulf of Lake Victoria (Kenya)**

J.O. Manyala, E. Vanden Berghe and S. Dadzie

Sci. Mar. 59(3-4): 555-563

**Present fish productivity and bioproduction potential of the world oceans**

P.A. Moiseev

Sci. Mar. 59(3-4): 565-569

**Some Fishery and Biological Aspects of Jack Mackerels, Genus *Trachurus* (Carangidae)**

Y. Suda, T. Machii and H. Orrego

Sci. Mar. 59(3-4): 571-580

**Improving pelagic fish retention in sampling trawls with a fish funnel**

I.K. Workman, C.W. Taylor and J.W. Watson

Sci. Mar. 59(3-4): 581-585

**The fishery of horse mackerel (*Trachurus symmetricus murphyi*) in the South Pacific Ocean, with notes on the fishery off central-southern Chile**

H. Arancibia, L. Cubillos, D. Arcos, A. Grechina and L. Vilugron

Sci. Mar. 59(3-4): 589-596

**Stock assessment of the Brazilian sardine, *Sardinella brasiliensis*, of the southeastern Coast of Brazil**

M.C. Cergole

Sci. Mar. 59(3-4): 597-610

**Horse mackerel and false scad stock assessment and catch projections, CEEAF Divisions 34.1.3 and 34.3.1**

C. Maxim

Sci. Mar. 59(3-4): 611-627

**Optimizing yields of the king mackerel (*Scomberomorus cavalla*) fishery in the western and southern Gulf of Mexico**

E.A. Chávez and F. Arreguín-Sánchez

Sci. Mar. 59(3-4): 629-636

**Population dynamics of the king mackerel (*Scomberomorus cavalla*) of the Campeche Bank, Mexico**

F. Arreguín-Sánchez, M.A. Cabrera and F.A. Aguilar

Sci. Mar. 59(3-4): 637-645

**Comparative growth performance of horse mackerel of the genus *Trachurus*, with emphasis on *T. symmetricus murphyi* in Chile**

L. Cubillos and H. Arancibia

Sci. Mar. 59(3-4): 647-652

**Assessment and management of fish populations: a critical view**

J.A. Pereiro

Sci. Mar. 59(3-4): 653-660

**INDEX**

**Subject Index, Author Index**

-

Sci. Mar. 59(3-4): 661-671



Please, send comments to [scimar@icm.csic.es](mailto:scimar@icm.csic.es)

ICM (CSIC) - Passeig Marítim de la Barceloneta, 37-49. E-08003 Barcelona (Spain)