

Fish Ageing Precision Articles

12 December, 2020

Acre, M. R., C. Alejandrez, J. East, W. A. Massure, S. Miyazono, J. E. Pease, E. L. Roesler, H. M. Williams, and T. B. Grabowski. 2017. Comparison of the precision of age estimates generated from fin rays, scales, and otoliths of Blue Sucker. *Southeastern Naturalist* 16:215–224.

Adams, J., and D. Kerstetter. 2014. Age and growth of three coastal-pelagic tunas (Actinopterygii: Perciformes: Scombridae) in the Florida Straits, USA: Blackfin Tuna, *Thunnus atlanticus*, Little Tunny, *Euthynnus alletteratus*, and Skipjack Tuna, *Katsuwonus pelamis*. *Acta Ichthyologica et Piscatoria* 44:201–211.

Albuquerque, C. Q., L. C. S. Lopes, A. J. Jaureguizar, and M. V. Condini. 2019. The visual quality of annual growth increments in fish otoliths increases with latitude. *Fisheries Research* 220:105351.

Allman, R. J., W. F. Patterson, C. L. Fioramonti, and A. E. Pacicco. 2018. Factors affecting estimates of size at age and growth in Grey Triggerfish *Balistes capriscus* from the northern Gulf of Mexico. *Journal of Fish Biology* 92:386–398.

Allman, Robert J., Gary R. Fitzhugh, K. J. Starzinger, and R. A. Farsky. 2005. Precision of age estimation in Red Snapper (*Lutjanus campechanus*). *Fisheries Research* 73:123–133.

Al-Rasady, I., A. Govender, and S. M. Al-Jufaili. 2013. Age and growth of Longnose Trevally (*Carangoides chrysophrys*) in the Arabian Sea. *Journal of Applied Ichthyology* 29:1056–1060.

Anderson, J., A. Morison, and D. Ray. 1992a. Age and growth of Murray Cod, *Maccullochella peelii* (Perciformes: Percichthyidae), in the Lower Murray-Darling Basin, Australia, from thin-sectioned otoliths. *Marine and Freshwater Research* 43:983–1013.

Anderson, J., A. Morison, and D. Ray. 1992b. Validation of the use of thin-sectioned otoliths for determining the age and growth of Golden Perch, *Macquaria ambigua* (Perciformes: Percichthyidae), in the Lower Murray-Darling Basin, Australia. *Marine and Freshwater Research* 43:1103–1128.

Andrade, H. A. 2004. Age and growth of the Searobin (*Prionotus punctatus*) in Brazilian waters. *Bulletin of Marine Science* 75:1–9.

Andrade, I., D. Rosa, R. Muñoz-Lechuga, and R. Coelho. 2019. Age and growth of the Blue Shark (*Prionace glauca*) in the Indian Ocean. *Fisheries Research* 211:238–246.

Andrews, A. H., G. M. Cailliet, and K. H. Coale. 1999. Age and growth of the Pacific Grenadier (*Coryphaenoides acrolepis*) with age estimate validation using an improved radiometric ageing technique. *Canadian Journal of Fisheries and Aquatic Sciences* 56:1339–1350.

Andrews, A. H., E. A. Laman, T. Bennett, E. Jones, and G. M. Cailliet. 2005. Age and growth of Spotted Sand Bass, *Paralabrax maculatofasciatus*, in Bahia de Los Angeles, Baja California, Mexico, with age validation using otolith edge analysis. *Bulletin, Southern California Academy of Sciences* 104:14–25.

Anislado-Tolentino, V., M. G. Cabello, F. A. Linares, and C. R. Mendoza. 2008. Age and growth of the Scalloped Hammerhead Shark, *Sphyrna lewini* (Griffith & Smith, 1834) from the Southern coast of Sinaloa, México. *Hidrobiológica* 18:31–40.

Artero, C., D. Murie, C. Koenig, R. Berzins, C. Bouchon, and L. Lampert. 2015. Age, growth, and mortality of the Atlantic Goliath Grouper *Epinephelus itajara* in French Guiana. *Endangered Species Research* 28:275–287.

- Aschenbrenner, A., and B. P. Ferreira. 2015. Age, growth and mortality of *Lutjanus alexandrei* in estuarine and coastal waters of the tropical south-western Atlantic. *Journal of Applied Ichthyology* 31:57–64.
- Aschenbrenner, A., M. O. Freitas, G. R. A. Rocha, R. L. de Moura, R. B. Francini-Filho, C. Minte-Vera, and B. P. Ferreira. 2017. Age, growth parameters and fisheries indices for the Lane Snapper in the Abrolhos Bank, SW Atlantic. *Fisheries Research* 194:155–163.
- Ayyildiz, H., A. Altın, and B. Kizilkaya. 2019. Age and growth of Common Pandora, *Pagellus erythrinus* (Perciformes; Sparidae) from the Gökçeada Island, North Aegean Sea. *Research in Marine Sciences* 4:587–598.
- Ba, A., K. Diouf, F. Guilhaumon, and J. Panfili. 2015. Slow growth of the overexploited Milk Shark *Rhizoprionodon acutus* affects its sustainability in west Africa. *Journal of Fish Biology* 87:912–929.
- Baje, L., J. Smart, M. I. Grant, A. Chin, W. White, and C. A. Simpfendorfer. 2019. Age, growth and maturity of the Australian Blackspot Shark (*Carcharhinus coatesi*) in the Gulf of Papua. *Pacific Conservation Biology* 25:403–412.
- Baje, L., J. J. Smart, A. Chin, W. T. White, and C. A. Simpfendorfer. 2018. Age, growth and maturity of the Australian Sharpnose Shark *Rhizoprionodon taylori* from the Gulf of Papua. *PLOS ONE* 13:e0206581.
- Baker, E. A., and T. S. McComish. 1998. Precision of ages determined from scales and opercles for Yellow Perch *Perca flavescens*. *Journal of Great Lakes Research* 24:658–665.
- Baker, M. R., M. E. Matta, M. Beaulieu, N. Paris, S. Huber, O. J. Graham, T. Pham, N. B. Sisson, C. P. Heller, and A. Witt. 2019. Intra-seasonal and inter-annual patterns in the demographics of Sand Lance and response to environmental drivers in the North Pacific. *Marine Ecology Progress Series* 617:221–244.
- Balazik, M. T., S. P. McIninch, G. C. Garman, and R. J. Latour. 2012. Age and growth of Atlantic Sturgeon in the James River, Virginia, 1997-2011. *Transactions of the American Fisheries Society* 141:1074–1080.
- Barada, T. J., A. J. Blank, and M. A. Pegg. 2011. Bias, precision, and processing time of otoliths and pectoral spines used for age estimation of Channel Catfish. *American Fisheries Society Symposium* 77:723–731.
- Barbieri, L. R., M. E. C. Jr, and C. M. Jones. 1994. Age, growth, and mortality of Atlantic Croaker, *Micropogonias undulatus*, in the Chesapeake Bay region, with a discussion of apparent geographic changes in population dynamics. *Fishery Bulletin* 91:1–12.
- Bargione, G., F. Donato, M. La Mesa, C. Mazzoldi, E. Riginella, C. Vasapollo, M. Virgili, and A. Lucchetti. 2019. Life-history traits of the Spiny Dogfish *Squalus acanthias* in the Adriatic Sea. *Scientific reports* 9:1–10.
- Barnett, B. K., J. P. Chanton, R. Ahrens, L. Thornton, and W. F. P. Iii. 2020. Life history of northern Gulf of Mexico Warsaw Grouper *Hyporthodus nigritus* inferred from otolith radiocarbon analysis. *PLOS ONE* 15:e0228254.
- Barreto, R. R., R. P. Lessa, F. H. Hazin, and F. M. Santana. 2011. Age and growth of the Blacknose Shark, *Carcharhinus acronotus* (Poey, 1860) off the northeastern Brazilian Coast. *Fisheries Research* 110:170–176.
- Barrientos, C. A., D. J. Murie, and J. E. Hill. 2019. Age, growth, and mortality rates of the Giant Cichlid in Guatemala. *Transactions of the American Fisheries Society* 148:176–190.
- Basusta, N., and E. Aslan. 2018. Age and growth of Bull Ray *Aetomylaeus bovinus* (Chondrichthyes: Myliobatidae) from the northeastern Mediterranean coast of Turkey. *Cahiers de Biologie Marine* 59:107–114.
- Başusta, A., N. Başusta, M. Calt, and E. I. Özcan. 2017. A study on age and growth characteristics of Spiny Gurnard (*Lepidotrigla dieuzeidei* Blanc & Hureau, 1973), northeastern Mediterranean Sea. *Journal of Applied Ichthyology* 33:966–970.
- Bauerlien, C. J., M. R. Cornett, E. A. Zielonka, D. P. Crane, and J. S. Bulak. 2018. Precision of calcified structures used for estimating age of Chain Pickerel *Esox niger*. *North American Journal of Fisheries Management* 38.

- Beckman, D. W. 2002. Comparison of aging methods and validation of otolith ages for the Rainbow Darter, *Etheostoma caeruleum*. *Copeia* 2002:830–835.
- Beckman, D. W., A. L. Stanley, J. H. Render, and C. A. Wilson. 1990. Age and growth of Black Drum in Louisiana waters of the Gulf of Mexico. *Transactions of the American Fisheries Society* 119:537–544.
- Beckman, D. W., C. A. Wilson, and A. L. Stanley. 1988. Age and growth of Red Drum, *Sciaenops ocellatus*, from offshore waters of the northern Gulf of Mexico. *Fisheries Bulletin*, U.S. 87:17–28.
- Bellodi, A., C. Porcu, R. Cannas, A. Cau, M. F. Marongiu, A. Mulas, S. Vittori, and M. C. Follesa. 2017. Life-history traits of the Long-Nosed Skate *Dipturus oxyrinchus*. *Journal of Fish Biology* 90:867–888.
- Ben-Aderet, N., E. M. Johnston, R. Cravey, and S. A. Sandin. 2020. Revisiting the life history of Yellowtail Jack (*Seriola dorsalis*) in the Southern California Bight: New evidence for ontogenetic habitat shifts and regional differences in a changing environment. *FB* 118:158–170.
- Besler, D. A. 1999. Utility of scales and whole otoliths for aging Largemouth Bass in North Carolina. *Proceedings of the Annual Conference of the Southeastern Fish and Wildlife Agencies* 53:119–129.
- Bettinger, J. M., and J. S. Crane. 2011. Validation of annulus formation in otoliths of Notchlip Redhorse (*Moxostoma collapsum*) and Brassy Jumprock (*moxostoma* sp.) in Broad River, South Carolina, with observations on their growth and mortality. *Southeastern Naturalist* 10:443–458.
- Bishop, S. D. H., M. P. Francis, C. Duffy, and J. C. Montgomery. 2006. Age, growth, maturity, longevity and natural mortality of the Shortfin Mako Shark (*Isurus oxyrinchus*) in New Zealand waters. *Marine and Freshwater Research* 57:143–154.
- Blackwell, B. G., T. M. Kaufman, and T. S. Moos. 2016. An assessment of calcified structures for estimating Northern Pike ages. *North American Journal of Fisheries Management* 36:964–974.
- Blackwell, B. G., T. M. Kaufman, and T. S. Moos. 2019. Evaluation of anal spines, dorsal spines, and scales as potential nonlethal surrogates to otoliths for estimating ages of Largemouth Bass and Smallmouth Bass. *North American Journal of Fisheries Management* 39:596–603.
- Bokhutlo, T., O. L. F. Weyl, K. Mosepele, and G. G. Wilson. 2015. Age and growth of Sharptooth Catfish, *Clarias gariepinus* (Burchell, 1822) (Clariidae), in the Lower Okavango Delta, Botswana. *Marine and Freshwater Research* 66:420–428.
- Bostanci, D. 2008. A comparison of calcified structures for aging of Pikeperch (*Sander lucioperca*) in Bafra Fish Lake, Turkey. *Journal of Freshwater Ecology* 23:485–486.
- Bostanci, D., G. Kurucu, and N. Polat. 2015. Evaluating bony structures for ageing and growth parameters of *Capoeta banarescui* inhabiting the lower Melet River (Ordu, Turkey). *Journal of Applied Ichthyology* 31:704–708.
- Bostanci, D., N. Polat, and S. Yilmaz. 2009. Age determination and annulus formation of Crucian Carp (*Carassius gibelio*) inhabiting Egirdir Lake and Bafra Fish Lake, Turkey. *Journal of Freshwater Ecology* 24:331–333.
- Boughamou, N. 2014. Otolithometry and scalimetry – two valid methods to describe the growth of Peacock Wrasse, *Symphodus tinca* (Actinopterygii: Perciformes: Labridae) from eastern Algeria. *Acta Ichthyologica et Piscatoria* 44:285–293.
- Boxrucker, J. 1986. A comparison of the otolith and scale methods for aging White Crappies in Oklahoma. *North American Journal of Fisheries Management* 6:122–125.
- Braaten, P. J., S. E. Campana, D. B. Fuller, R. D. Lott, R. M. Bruch, and G. R. Jordan. 2015. Age estimations of wild Pallid Sturgeon (*Scaphirhynchus albus*, Forbes & Richardson 1905) based on pectoral fin spines, otoliths and bomb radiocarbon: Inferences on recruitment in the dam-fragmented Missouri River. *Journal of Applied Ichthyology* 31:821–829.
- Braaten, P. J., M. R. Doeringsfeld, and C. S. Guy. 1999. Comparison of age and growth estimates for River Carpsuckers using scales and dorsal fin ray sections. *North American Journal of Fisheries Management* 19:786–792.

- Braccini, J. M., B. M. Gillanders, T. I. Walker, and J. Tovar-Avila. 2007. Comparison of deterministic growth models fitted to length-at-age data of the Piked Spurdog (*Squalus megalops*) in south-eastern Australia. *Marine and Freshwater Research* 58:24–33.
- Bradley, K. A., and A. Arkhipkin. 2020. Age and growth of Slender Tuna (*Allothunnus fallai*) in an unexploited temperate population. *Journal of Fish Biology* 97:1257–1261.
- Branigan, P. R., K. A. Meyer, N. C. Wahl, M. P. Corsi, and A. M. Dux. 2019. Accuracy and precision of age estimates obtained from three calcified structures for known-age Kokanee. *North American Journal of Fisheries Management* 39:498–508.
- Breeggemann, J. J., C.-A. Hayer, J. Krause, L. D. Schultz, K. N. Bertrand, and B. D. S. Graeb. 2014. Estimating the ages of Mountain Sucker *Catostomus platyrhynchus* from the Black Hills: Precision, maturation, and growth. *Western North American Naturalist* 74:299–310.
- Brenden, T. O., E. M. Hallerman, and B. R. Murphy. 2006. Sectioned pelvic fin ray ageing of Muskellunge *Esox masquinongy* from a Virginia river: Comparisons among readers, with cleithrum estimates, and with tag-recapture growth data. *Fisheries Management and Ecology* 13:31–37.
- Brennan, J. S., and G. M. Cailliet. 1989. Comparative age-determination techniques for White Sturgeon in California. *Transactions of the American Fisheries Society* 118:296–310.
- Brouder, M. J. 2005. Age and growth of Roundtail Chub in the Upper Verde River, Arizona. *Transactions of the American Fisheries Society* 134:866–871.
- Brown, P., C. Green, K. P. Sivakumaran, D. Stoessel, and A. Giles. 2004. Validating otolith annuli for annual age determination of Common Carp. *Transactions of the American Fisheries Society* 133:190–196.
- Brusher, J., and J. Schull. 2009. Non-lethal age determination for juvenile Goliath Grouper *Epinephelus itajara* from southwest Florida. *Endangered Species Research* 7:205–212.
- Bubley, W. J., J. Kneebone, J. A. Sulikowski, and P. C. W. Tsang. 2012. Reassessment of Spiny Dogfish *Squalus acanthias* age and growth using vertebrae and dorsal-fin spines. *Journal of Fish Biology* 80:1300–1319.
- Buckmeier, D. L., E. R. Irwin, R. K. Betsill, and J. A. Prentice. 2002. Validity of otoliths and pectoral spines for estimating ages of Channel Catfish. *North American Journal of Fisheries Management* 22:934–942.
- Buckmeier, D. L., N. G. Smith, and K. S. Reeves. 2012. Utility of Alligator Gar age estimates from otoliths, pectoral fin rays, and scales. *Transactions of the American Fisheries Society* 141:1510–1519.
- Buckmeier, D. L., R. Snow, N. G. Smith, and C. Porter. 2018. Are age estimates for Longnose Gar and Spotted Gar accurate? An evaluation of sagittal otoliths, pectoral fin rays, and branchiostegal rays. *Transactions of the American Fisheries Society* 147:639–648.
- Burton, M. L., J. C. Potts, A. J. Poholek, A. Ostrowski, and J. Page. 2019. Age, growth, natural mortality, and reproductive seasonality of Knobbed Porgy from southeastern United States waters. *Marine and Coastal Fisheries* 11:231–245.
- Butler, E. C., A.-R. Childs, M. V. Milner, M. W. Farthing, M. I. Duncan, A. C. Winkler, and W. M. Potts. 2021. Do contemporary age-growth models overlook life-history complexities in protandrous fishes? A case study on the large protandrous polynemid, the Giant African Threadfin *Polydactylus quadrifilis*. *Fisheries Research* 233:105770.
- Bwanika, G. N., D. J. Murie, and L. J. Chapman. 2007. Comparative age and growth of Nile Tilapia (*Oreochromis niloticus* L.) in lakes Nabugabo and Wamala, Uganda. *Hydrobiologia* 589:287–301.
- Calis, E., E. H. Jackson, C. P. Nolan, and F. Jeal. 2005. Preliminary age and growth estimates of the Rabbitfish, *Chimaera monstrosa*, with implications for future resource management. *Journal of Northwest Atlantic Fishery Science* 35:15–26.
- Caltabellotta, F. P., Z. A. Siders, D. J. Murie, F. S. Motta, G. M. Cailliet, and O. B. F. Gadig. 2019. Age and growth of three endemic threatened guitarfishes *Pseudobatos horkelii*, *P. Percellens* and *Zapteryx brevirostris* in the western South Atlantic Ocean. *Journal of Fish Biology* 95:1236–1248.

- Carlson, J. K., and I. E. Baremore. 2005. Growth dynamics of the Spinner Shark (*Carcharhinus brevipinna*) off the United States southeast and Gulf of Mexico coasts: A comparison of methods. *Fishery Bulletin* 103:280–291.
- Carlson, J. K., and G. R. Parsons. 1997. Age and growth of the Bonnethead Shark, *Sphyrna tiburo*, from northwest Florida, with comments on clinal variation. *Environmental Biology of Fishes* 50:331–341.
- Carmo, W. P. D., L. F. Fávaro, R. Coelho, W. P. D. Carmo, L. F. Fávaro, and R. Coelho. 2018. Age and growth of *Zapteryx brevirostris* (Elasmobranchii: Rhinobatidae) in southern Brazil. *Neotropical Ichthyology* 16.
- Casselman, J., C. Jones, and S. Campana. 2019. Bomb radiocarbon age validation for the long-lived, unexploited Arctic fish species *Coregonus clupeaformis*. *Marine and Freshwater Research* 70:1781–1788.
- Catterson, M. R., D. C. Love, T. M. Sutton, and M. V. McPhee. 2020. Interactions between marine growth and life history diversity of Steelhead from the Situk River, Alaska. *North American Journal of Fisheries Management* 40:242–255.
- Cavole, L. M., L. G. Cardoso, M. S. Almeida, and M. Haimovici. 2018. Unravelling growth trajectories from complicated otoliths – the case of Brazilian Codling *Urophycis brasiliensis*. *Journal of fish biology* 92:1290–1311.
- Cazorla, A. L., and N. Sidorkewicz. 2011. Age, growth and reproduction in Creole Perch (*Percichthys trucha*) in the Negro River, Argentinean Patagonia. *Journal of Applied Ichthyology* 27:30–38.
- Cerdenares-Ladrón De Guevara, G., E. Morales-Bojórquez, and R. Rodríguez-Sánchez. 2011. Age and growth of the Sailfish *Istiophorus platypterus* (Istiophoridae) in the Gulf of Tehuantepec, Mexico. *Marine Biology Research* 7:488–499.
- Cervantes-Gutiérrez, F., J. Tovar-Ávila, and F. Galván-Magaña. 2018. Age and growth of the Banded Guitarfish *Zapteryx exasperata* (Chondrichthyes: Trygonorrhinidae). *Marine and Freshwater Research* 69:66–73.
- Charvet, P., F. M. Santana, K. L. D. Lima, and R. Lessa. 2018. Age and growth of the endemic Xingu River Stingray *Potamotrygon leopoldi* validated using fluorescent dyes. *Journal of Fish Biology* 92:1985–1999.
- Chater, I., A. Romdhani, J. L. Dufour, K. Mahe, P. Francour, and N. Chakroun-Marzouk. 2015. Otolith growth and age estimation of Bastard Grunt, *Pomadourys incisus* (Actinopterygii: Perciformes: Haemulidae), in the Gulf of Tunis (Central Mediterranean). *Acta Ichthyologica et Piscatoria* 45:57–63.
- Chater, I., A. Romdhani-Dhahri, J. L. Dufour, K. Mahé, and N. Chakroun-Marzouk. 2018. Age, growth and mortality of *Sciaena umbra* (Sciaenidae) in the Gulf of Tunis. *Scientia Marina* 82:17–25.
- Chen, K.-S., T. Shimose, T. Tanabe, C.-Y. Chen, and C.-C. Hsu. 2012. Age and growth of Albacore *Thunnus alalunga* in the North Pacific Ocean. *Journal of Fish Biology* 80:2328–2344.
- Choat, J., and L. Axe. 1996. Growth and longevity in acanthurid fishes; An analysis of otolith increments. *Marine Ecology Progress Series* 134:15–26.
- Cicia, A. M., W. B. Driggers, G. W. Ingram, J. Kneebone, P. C. W. Tsang, D. M. Koester, and J. A. Sulikowski. 2009. Size and age estimates at sexual maturity for the Little Skate *Leucoraja erinacea* from the western Gulf of Maine, U.S.A. *Journal of Fish Biology* 75:1648–1666.
- Coelho, R., and K. Erzini. 2008. Life history of a wide-ranging Deepwater Lantern Shark in the north-east Atlantic, *Etmopterus spinax* (Chondrichthyes: Etmopteridae), with implications for conservation. *Journal of Fish Biology* 73:1419–1443.
- Coiraton, C., J. Tovar-Ávila, K. C. Garcés-García, J. A. Rodríguez-Madrigal, R. Gallegos-Camacho, D. A. Chávez-Arrenquín, and F. Amezcua. 2019. Periodicity of the growth-band formation in vertebrae of juvenile Scalloped Hammerhead Shark *Sphyrna lewini* from the Mexican Pacific Ocean. *Journal of fish biology* 95:1072–1085.

- Colombo, R. E., Q. E. Phelps, C. M. Miller, J. E. Garvey, R. C. Heidinger, and N. S. Richards. 2010. Comparison of Channel Catfish age estimates and resulting population demographics using two common structures. *North American Journal of Fisheries Management* 30:305–308.
- Conrath, C. L., J. Gelsleichter, and J. A. Musick. 2002. Age and growth of the Smooth Dogfish (*Mustelus canis*) in the northwest Atlantic Ocean. *Fishery Bulletin* 100:674–682.
- Copeland, T., M. W. Hyatt, and J. Johnson. 2007. Comparison of methods used to age Spring-Summer Chinook Salmon in Idaho: Validation and simulated effects on estimated age composition. *North American Journal of Fisheries Management* 27:1393–1401.
- Corsso, J. T., O. B. F. Gadig, F. P. Caltabellotta, R. Barreto, and F. S. Motta. 2020. Age and growth of two sharpnose shark species (*Rhizoprionodon lalandii* and *R. Porosus*) in subtropical waters of the south-western Atlantic. *Marine and Freshwater Research*.
- Coulson, P. G. 2019. The life-history of *Cheilodactylus rubrolabiatus* from south-western Australia and comparison of biological characteristics of the Cheilodactylidae and Latridae: Support for an amalgamation of families. *Journal of Fish Biology* 94:374–390.
- Coulson, P. G., N. G. Hall, and I. C. Potter. 2016. Biological characteristics of three co-occurring species of armorhead from different genera vary markedly from previous results for the Pentacerotidae. *Journal of Fish Biology* 89:1393–1418.
- Coulson, P. G., D. J. Hodgkinson, and L. E. Beckley. 2020. Age validation and growth of the Small-Tooth Flounder *Pseudorhombus jenynsii* from estuaries and coastal waters in south-western Australia. *Ichthyological Research*.
- Cuevas-Zimbrón, E., O. Sosa-Nishizaki, J. C. Pérez-Jiménez, and J. B. O’Sullivan. 2013. An analysis of the feasibility of using caudal vertebrae for ageing the Spinetail Devilray, *Mobula japanica* (Müller and Henle, 1841). *Environmental Biology of Fishes* 96:907–914.
- Currey, L. M., A. J. Williams, B. D. Mapstone, C. R. Davies, G. Carlos, D. J. Welch, C. A. Simpfendorfer, A. C. Ballagh, A. L. Penny, E. M. Grandcourt, A. Mapleston, A. S. Wiebkin, and K. Bean. 2013. Comparative biology of tropical *lethrinus* species (Lethrinidae): Challenges for multi-species management. *Journal of Fish Biology* 82:764–788.
- Dahl, K. A., M. A. Edwards, and W. F. P. Iii. 2019. Density-dependent condition and growth of invasive Lionfish in the northern Gulf of Mexico. *Marine Ecology Progress Series* 623:145–159.
- Daley, T. T., and R. T. Leaf. 2019. Age and growth of Atlantic Chub Mackerel (*Scomber colias*) in the northwest Atlantic. *Journal of Northwest Atlantic Fishery Science* 50:1–12.
- Davis, C. D., G. M. Cailliet, and D. A. Ebert. 2007. Age and growth of the Roughtail Skate *Bathyraja trachura* (Gilbert 1892) from the eastern North Pacific. *Environmental Biology of Fishes* 80:325.
- Dawson, H. A., M. L. Jones, K. T. Scribner, and S. A. Gilmore. 2009. An assessment of age determination methods for Great Lakes larval Sea Lampreys. *North American Journal of Fisheries Management* 29:914–927.
- Debicella, J. M. 2005. Accuracy and precision of fin-ray ageing for Gag (*Mycteroperca microlepis*). *Masters of Science, Florida*.
- Degsera, A., M. Minwyelet, and T. Yosef. 2020. Age and growth of Nile Tilapia *Oreochromis niloticus* (Linnaeus, 1758) from Lake Tana, Ethiopia. *African Journal of Aquatic Science* 45:509–519.
- Delgado, J., S. Reis, J. A. González, E. Isidro, M. Biscoito, M. Freitas, and V. M. Tuset. 2013. Reproduction and growth of *Aphanopus carbo* and *A. Intermedius* (Teleostei: Trichiuridae) in the northeastern Atlantic. *Journal of Applied Ichthyology* 29:1008–1014.
- DeMartini, E., A. Andrews, K. Howard, B. Taylor, D. Lou, and M. Donovan. 2017. Comparative growth, age at maturity and sex change, and longevity of Hawaiian parrotfishes with bomb-radiocarbon validation. *Canadian Journal of Fisheries and Aquatic Sciences* 75:580–589.

- DeMartini, E. E., J. H. Uchiyama, R. L. Humphreys Jr., J. D. Sampaga, and H. A. Williams. 2007. Age and growth of Swordfish (*Xiphias gladius*) caught by the Hawaii-Based pelagic longline fishery. *Fishery Bulletin* 105:356–367.
- Dembkowski, D. J., D. A. Isermann, and R. P. Koenigs. 2017. Walleye age estimation using otoliths and dorsal spines: Preparation techniques and sampling guidelines based on sex and total length. *Journal of Fish and Wildlife Management* 8:474–486.
- de Santana, H. S., and C. V. Mente-Vera. 2017. Age and growth of *Prochilodus lineatus* in a spatially structured population: Is there concordance between otoliths and scales? *Environmental Biology of Fishes* 100:223–235.
- de Santana, H. S., A. C. Rodrigues, and C. D. Tos. 2016. Patterns of reproduction and growth of the catfish *Iheringichthys labrosus* (Lütken, 1874) after a reservoir formation. *Journal of Applied Ichthyology* 32:456–463.
- Di Maio, F., M. L. Geraci, D. Scannella, F. Falsone, F. Colloca, S. Vitale, P. Rizzo, and F. Fiorentino. 2020. Age structure of spawners of the Axillary Seabream, *Pagellus acarne* (Risso, 1827), in the central Mediterranean Sea (Strait of Sicily). *Regional Studies in Marine Science* 34:101082.
- Doño, F., S. Montealegre-Quijano, A. Domingo, and P. G. Kinas. 2015. Bayesian age and growth analysis of the Shortfin Mako Shark *Isurus oxyrinchus* in the western South Atlantic Ocean using a flexible model. *Environmental Biology of Fishes* 98:517–533.
- Driggers, W., J. Carlson, B. Cullum, J. Dean, and D. Oakley. 2004. Age and growth of the Blacknose Shark, *Carcharhinus acronotus*, in the western North Atlantic Ocean with comments on regional variation in growth rates. *Environmental Biology of Fishes* 71:171–178.
- Duan, Y.-J., C.-X. Xie, X.-J. Zhou, B.-S. Ma, and B. Huo. 2014. Age and growth characteristics of *Schizopygopsis younghusbandi* Regan, 1905 in the Yarlung Tsangpo River in Tibet, China. *Journal of Applied Ichthyology* 30:948–954.
- Dulčić, J., A. Pallaoro, S. Matić-Skoko, B. Dragičević, P. Tutman, R. Grgičević, N. Stagličić, V. Bukvić, J. Pavličević, B. Glamuzina, and M. Kraljević. 2011. Age, growth and mortality of common Two-Banded Seabream, *Diplodus vulgaris* (Geoffroy Saint-Hilaire, 1817), in the eastern Adriatic Sea (Croatian coast). *Journal of Applied Ichthyology* 27:1254–1258.
- Dutka-Gianelli, J., and D. J. Murie. 2001. Age and growth of Sheepshead, *Archosargus probatocephalus* (Pisces: Sparidae), from the northwest coast of Florida. *Bulletin of Marine Science* 68:69–83.
- Dzul, M. C., D. B. Gaines, J. R. Fischer, M. C. Quist, and S. J. Dinsmore. 2012. Evaluation of otoliths of Salt Creek Pupfish (*Cyprinodon salinus*) for use in analyses of age and growth. *The Southwestern Naturalist* 57:412–416.
- Efitre, J., D. J. Murie, and L. J. Chapman. 2016. Age validation, growth and mortality of introduced *Tilapia zillii* in Crater Lake Nkuruba, Uganda. *Fisheries Management and Ecology* 23:66–75.
- Eklund, J., R. Parmanne, and G. Aneer. 2000. Between-reader variation in Herring otolith ages and effects on estimated population parameters. *Fisheries Research* 46:147–154.
- Ellender, B. R., O. L. F. Weyl, and H. Winker. 2012. Age and growth and maturity of southern Africa's largest cyprinid fish, the Largemouth Yellowfish *Labeobarbus kimberleyensis*. *Journal of Fish Biology* 81:1271–1284.
- Elzey, S. P., K. A. Rogers, and K. J. Trull. 2014. Comparison of 4 aging structures in the American Shad (*Alosa sapidissima*). *Fishery Bulletin* 113:47–54.
- Erhardt, J. M., and D. L. Scarnecchia. 2013. Precision and accuracy of age and growth estimates based on fin rays, scales, and mark-recapture information for migratory Bull Trout. *Northwest Science* 87:307–316.
- Erickson, C. M. 1983. Age determination of Manitoban Walleyes using otoliths, dorsal spines, and scales. *North American Journal of Fisheries Management* 3:176–181.

- Esteves, E., P. Simões, H. M. Silva, and J. P. Andrade. 1995. Ageing of Swordfish, *Xiphias gladius* Linnaeus, 1758, from the Azores, using sagittae, anal-fin spines and vertebrae. *Arquipélago. Ciências Biológicas e Marinhas- Life and Marine Sciences* 13:39–51.
- Ewing, G. P., J. M. Lyle, R. J. Murphy, J. M. Kalish, and P. E. Ziegler. 2007. Validation of age and growth in a long-lived temperate reef fish using otolith structure, oxytetracycline and bomb radiocarbon methods. *Marine and Freshwater Research* 58:944–955.
- Ewing, G. P., D. C. Welsford, A. R. Jordan, and C. Buxton. 2003. Validation of age and growth estimates using thin otolith sections from the Purple Wrasse, *Notolabrus fucicola*. *Marine and Freshwater Research* 54:985–993.
- Farley, J. H., A. J. Williams, N. P. Clear, C. R. Davies, and S. J. Nicol. 2013. Age estimation and validation for South Pacific Albacore *Thunnus alalunga*. *Journal of Fish Biology* 82:1523–1544.
- Farrell, E. D., S. Mariani, and M. W. Clarke. 2010. Age and growth estimates for the Starry Smoothhound (*Mustelus asterias*) in the Northeast Atlantic Ocean. *ICES Journal of Marine Science* 67:931–939.
- Faust, M. D., J. J. Breeggemann, S. Bahr, and B. D. Graeb. 2013. Precision and bias of cleithra and sagittal otoliths used to estimate ages of Northern Pike. *Journal of Fish and Wildlife Management* 4:332–341.
- Faust, M. D., D. A. Isermann, M. A. Luehring, and M. J. Hansen. 2015. Muskellunge growth potential in northern Wisconsin: Implications for trophy management. *North American Journal of Fisheries Management* 35:765–774.
- Feitosa, C. V., M. E. Araújo, and B. P. Ferreira. 2017. Estimates on age, growth and mortality of the French Angelfish *Pomacanthus paru* (Bloch, 1787) (Teleostei: Pomacanthidae) in the southwestern Atlantic. *Journal of Applied Ichthyology* 33:409–414.
- Fernando, A. V., C. R. Peacock, B. W. Baker, and M. A. Eggleton. 2014. Ageing precision and error analysis of whole-view and sectioned otoliths in Largemouth Bass and Spotted Bass. *Journal of the Southeastern Association of Fish and Wildlife Agencies* 1:75–82.
- Ferri, J., J. Brčić, F. Škeljo, L. Sršen, and A. Uvodić. 2017. A preliminary study on the age and growth of the Argentine, *Argentina sphyraena* (Actinopterygii: Osmeriformes: Argentinidae) from the eastern Adriatic Sea. *Acta Ichthyologica et Piscatoria* 47:365–369.
- Flain, M., and G. J. Glova. 1988. A test of the reliability of otolith and scale readings of Chinook Salmon (*Oncorhynchus tshawytscha*). *New Zealand Journal of Marine and Freshwater Research* 22:497–500.
- Fleming, W. L., and W. J. Stark. 2018. Precision of age estimates using three different aging methods for Walleye (*Sander vitreus*) in Cedar Bluff Reservoir, Kansas. *Transactions of the Kansas Academy of Science* 121:427–434.
- Flinn, S., S. Midway, and A. Ostrowski. 2019. Age and growth of Hardhead Catfish and Gafftopsail Catfish in coastal Louisiana, USA. *Marine and Coastal Fisheries* 11:362–371.
- Florin, A.-B., K. Hüsey, M. Blass, D. Oesterwind, R. Puntila, D. Ustups, C. Albrecht, Y. Heimbrand, E. Knospina, K. Koszarowski, and A. Odelström. 2018. How old are you—Evaluation of age reading methods for the invasive Round Goby (*Neogobius melanostomus*, Pallas 1814). *Journal of Applied Ichthyology* 34:653–658.
- Fogg, A. Q., J. T. Evans, M. S. Peterson, N. J. Brown-Peterson, E. R. Hoffmayer, and G. W. Ingram Jr. 2019. Comparison of age and growth parameters of invasive Red Lionfish (*Pterois volitans*) across the northern Gulf of Mexico. *Fishery Bulletin* 117:1–16.
- Fossen, I., O. T. Albert, and E. M. Nilssen. 2003. Improving the precision of ageing assessments for Long Rough Dab by using digitised pictures and otolith measurements. *Fisheries Research* 60:53–64.
- Francis, M. P., and C. Ó. Maolagáin. 2000. Age, growth and maturity of a New Zealand endemic shark (*Mustelus lenticulatus*) estimated from vertebral bands. *Marine and Freshwater Research* 51:35–42.

- Francis, M. P., C. Ó. Maolagáin, and D. Stevens. 2001. Age, growth, and sexual maturity of two New Zealand endemic skates, *Dipturus nasutus* and *D. Innominatus*. *New Zealand Journal of Marine and Freshwater Research* 35:831–842.
- Frazier, B. S., W. B. Driggers, D. H. Adams, C. M. Jones, and J. K. Loefer. 2014. Validated age, growth and maturity of the Bonnethead *Sphyrna tiburo* in the western North Atlantic Ocean. *Journal of Fish Biology* 85:688–712.
- Freitas, M. O., M. Previero, J. R. Leite, R. B. Francini-Filho, C. V. Minte-Vera, and R. L. Moura. 2019. Age, growth, reproduction and management of southwestern Atlantic's largest and endangered herbivorous reef fish, *Scarus trispinosus* Valenciennes, 1840. *PeerJ* 7:e7459.
- French, B., I. C. Potter, S. A. Hesp, P. G. Coulson, and N. G. Hall. 2014. Biology of the Harlequin Fish *Othos dentex* (Serranidae), with particular emphasis on sexual pattern and other reproductive characteristics. *Journal of Fish Biology* 84:106–132.
- Fujinami, Y., Y. Semba, S. Ohshimo, and S. Tanaka. 2018. Development of an alternative ageing technique for Blue Shark (*Prionace glauca*) using the vertebra. *Journal of Applied Ichthyology* 34:590–600.
- Gallagher, C. P., K. L. Howland, and R. J. Wastle. 2016. A comparison of different structures and methods for estimating age of northern-form Dolly Varden *Salvelinus malma malma* from the Canadian Arctic. *Polar Biology* 39:1257–1265.
- Gallagher, M. J., M. J. Green, and C. P. Nolan. 2006. The potential use of caudal thorns as a non-invasive ageing structure in the Thorny Skate (*Amblyraja radiata* Donovan, 1808). *Environmental Biology of Fishes* 77:265–272.
- Gallagher, M. J., and C. P. Nolan. 1999. A novel method for the estimation of age and growth in rajids using caudal thorns. *Canadian Journal of Fisheries and Aquatic Sciences* 56:1590–1599.
- García-Mederos, A. M., V. M. Tuset, J. I. Santana, and J. A. González. 2010. Reproduction, growth and feeding habits of Stout Beardfish *Polymixia nobilis* (Polymixiidae) off the Canary Islands (NE Atlantic). *Journal of Applied Ichthyology* 26:872–880.
- Gaygusuz, Ç. G. 2018. Age and growth of Rudd, *Scardinius erythrophthalmus* (Linnaeus, 1758), in ömerli Reservoir (istanbul, Turkey). *Aquatic Sciences and Engineering* 33:25–31.
- Gburski, C. M., S. K. Gaichas, and D. K. Kimura. 2007. Age and growth of Big Skate (*Raja binoculata*) and Longnose Skate (*R. Rhina*) in the Gulf of Alaska. *Environmental Biology of Fishes* 80:337–349.
- Gebremedhin, S., K. Bekaert, A. Getahun, S. Bruneel, W. Anteneh, P. Goethals, and E. Torrelee. 2019. Comparison of otolith readability and reproducibility of counts of translucent zones using different otolith preparation methods for four endemic *labeobarbus* species in Lake Tana, Ethiopia. *Water* 11(7):1336.
- Geraghty, P. T., A. S. Jones, J. Stewart, and W. G. Macbeth. 2012. Micro-computed tomography: An alternative method for shark ageing. *Journal of Fish Biology* 80:1292–1299.
- Geraghty, P. T., W. G. Macbeth, A. V. Harry, J. E. Bell, M. N. Yerman, and J. E. Williamson. 2014. Age and growth parameters for three heavily exploited shark species off temperate eastern Australia. *ICES Journal of Marine Science* 71:559–573.
- Gillanders, B. M., D. J. Ferrell, and N. L. Andrew. 1999. Aging methods for Yellowtail Kingfish, *Seriola lalandi*, and results from age- and size-based growth models. *Fishery Bulletin* 97:812–827.
- Girgin, H., and N. Basusta. 2020. Growth characteristics of the European Hake, *Merluccius merluccius* (Linnaeus, 1758), inhabiting northeastern Mediterranean. *Acta Adriatica*.
- Girgin, H., and N. Başusta. 2016. Testing staining techniques to determine age and growth of *Dasyatis pastinaca* (Linnaeus, 1758) captured in Iskenderun Bay, northeastern Mediterranean. *Journal of Applied Ichthyology* 32:595–601.
- Glass, W. R., L. D. Corkum, and N. E. Mandrak. 2011. Pectoral fin ray aging: An evaluation of a non-lethal method for aging gars and its application to a population of the threatened Spotted Gar. *Environmental Biology of Fishes* 90:235–242.

- Goldman, K. J., S. Branstetter, and J. A. Musick. 2006. A re-examination of the age and growth of Sand Tiger Sharks, *Carcharias taurus*, in the western North Atlantic: The importance of ageing protocols and use of multiple back-calculation techniques. *Environmental Biology of Fishes* 77:241–252.
- Goldman, K. J., and J. A. Musick. 2006. Growth and maturity of Salmon Sharks (*Lamna ditropis*) in the eastern and western North Pacific, and comments on back-calculation methods. *Fishery Bulletin* 104:278–292.
- Goosen, A. J. J., and M. J. Smale. 1997. A preliminary study of age and growth of the Smoothhound Shark *Mustelus mustelus* (Triakidae). *South African Journal of Marine Science* 18:85–91.
- Grabowski, T. B., S. P. Young, J. J. Isely, and P. C. Ely. 2012. Age, growth, and reproductive biology of three catostomids from the Apalachicola River, Florida. *Journal of Fish and Wildlife Management* 3:223–237.
- Grant, M. I., J. J. Smart, W. T. White, A. Chin, L. Baje, and C. A. Simpfendorfer. 2018. Life history characteristics of the Silky Shark *Carcharhinus falciformis* from the central west Pacific. *Marine and Freshwater Research* 69:562–573.
- Gray, C. A., M. C. Ives, W. G. Macbeth, and B. W. Kendall. 2010. Variation in growth, mortality, length and age compositions of harvested populations of the herbivorous fish *Girella tricuspidata*. *Journal of Fish Biology* 76:880–899.
- Grebel, J. M., and G. M. Cailliet. 2010. Age, growth, and maturity of Cabezon (*Scorpaenichthys marmoratus*) in California. *California Fish and Game* 96:36–52.
- Gregg, J. L., D. M. Anderl, and D. K. Kimura. 2006. Improving the precision of otolith-based age estimates for Greenland Halibut (*Reinhardtius hippoglossoides*) with preparation methods adapted for fragile sagittae. *Fishery Bulletin* 104:643–648.
- Griffin, K. M., Z. S. Beard, J. M. Flinders, and M. C. Quist. 2017. Estimating ages of Utah Chubs by use of pectoral fin rays, otoliths, and scales. *Western North American Naturalist* 77:189–194.
- Gu, P.-h., J.-g. Xiang, Y.-f. Chen, Y.-l. Li, J. Tang, S.-g. Xie, and Y. Chen. 2013. A comparison of different age estimation methods for the Northern Snakehead. *North American Journal of Fisheries Management* 33:994–999.
- Gumus, A., D. Bostanci, S. Yilmaz, and N. Polat. 2007. Age determination of *Scardinius erythrophthalmus* (Cyprinidae) inhabiting Bafra Fish Lakes (Samsun, Turkey) based on otolith readings and marginal increment analysis. *Cybiu* 31:59–66.
- Gutteridge, A. N., C. Huveneers, L. J. Marshall, I. R. Tibbetts, and M. B. Bennett. 2013. Life-history traits of a small-bodied coastal shark. *Marine and Freshwater Research* 64:54–65.
- Haas, D. L., D. A. Ebert, and G. M. Cailliet. 2016. Comparative age and growth of the Aleutian Skate, *Bathyraja aleutica*, from the eastern Bering Sea and Gulf of Alaska. *Environmental Biology of Fishes* 99:813–828.
- Haas, R. E., and C. W. Recksiek. 1995. Age verification of Winter Flounder in Narragansett Bay. *Transactions of the American Fisheries Society* 124:103–111.
- Haglund, J. M., and M. G. Mitro. 2017. Age validation of Brown Trout in driftless area streams in Wisconsin using otoliths. *North American Journal of Fisheries Management* 37:829–835.
- Hale, L. F., and I. E. Baremore. 2013. Age and growth of the Sandbar Shark (*Carcharhinus plumbeus*) from the northern Gulf of Mexico and the western North Atlantic Ocean. *Gulf of Mexico Science* 31:28–39.
- Hammers, B. E., and L. E. Miranda. 1991. Comparison of methods for estimating age, growth, and related population characteristics of White Crappies. *North American Journal of Fisheries Management* 11:492–498.
- Harris, J. E. 2020. Assessing accuracy and bias of protocols to estimate age of Pacific salmon using scales. *North American Journal of Fisheries Management* 40:1007–1022.

- Harry, A. V., A. J. Tobin, and C. A. Simpfendorfer. 2013. Age, growth and reproductive biology of the Spot-Tail Shark, *Carcharhinus sorrah*, and the Australian Blacktip Shark, *C. tilstoni*, from the Great Barrier Reef World Heritage Area, north-eastern Australia. *Marine and Freshwater Research* 64:277–293.
- Heimbrand, Y., K. E. Limburg, K. Hüsey, M. Casini, R. Sjöberg, A.-M. P. Bratt, S.-E. Levinsky, A. Karpushevskaya, K. Radtke, and J. Öhlund. 2020. Seeking the true time: Exploring otolith chemistry as an age-determination tool. *Journal of Fish Biology* 97:552–565.
- Helser, T. E., I. Benson, J. Erickson, J. Healy, C. Kestelle, and J. A. Short. 2019. A transformative approach to ageing fish otoliths using Fourier transform near infrared spectroscopy: A case study of eastern Bering Sea Walleye Pollock (*Gadus chalcogrammus*). *Canadian Journal of Fisheries & Aquatic Sciences* 76:780–789.
- Henderson, A. C., A. I. Arkhipkin, and J. N. Chtcherbich. 2004. Distribution, growth and reproduction of the White-Spotted Skate *Bathyraja albomaculata* (Norman, 1937) around the Falkland Islands. *Journal of Northwest Atlantic Fishery Science* 35:79–87.
- Herbst, S. J., and J. E. Marsden. 2011. Comparison of precision and bias of scale, fin ray, and otolith age estimates for Lake Whitefish (*Coregonus clupeaformis*) in Lake Champlain. *Journal of Great Lakes Research* 37:386–389.
- Hill, K. T., G. M. Cailliet, and R. L. Radtke. 1989. A comparative analysis of growth zones in four calcified structures of Pacific Blue Marlin, *Makaim nigricans*. *Fishery Bulletin*. U.S. 87:829–843.
- Hining, K. J., J. L. West, M. A. Kulp, and A. D. Neubauer. 2000. Validation of scales and otoliths for estimating age of Rainbow Trout from southern Appalachian streams. *North American Journal of Fisheries Management* 20:978–985.
- Hobbs, J.-P. A., A. J. Frisch, S. Mutz, and B. M. Ford. 2014. Evaluating the effectiveness of teeth and dorsal fin spines for non-lethal age estimation of a tropical reef fish, Coral Trout *Plectropomus leopardus*. *Journal of Fish Biology* 84:328–338.
- Hogan-West, K., P. G. Coulson, J. R. Tweedley, and N. R. Loneragan. 2020. Biological characteristics of the non-indigenous *Acentrogobius pflaumii* (Bleeker 1853) in a warm-temperate estuary, and thus very different from its typical environment. *Regional Studies in Marine Science* 33:100942.
- Holmes, B. J., V. M. Peddemors, A. N. Gutteridge, P. T. Geraghty, R. W. K. Chan, I. R. Tibbetts, and M. B. Bennett. 2015. Age and growth of the Tiger Shark *Galeocerdo cuvier* off the east coast of Australia. *Journal of Fish Biology* 87:422–448.
- Horn, P. 2002. Age and growth of Patagonian Toothfish (*Dissostichus eleginoides*) and Antarctic Toothfish (*D. Mawsoni*) in waters from the New Zealand subantarctic to the Ross Sea, Antarctica. *Fisheries Research* 56:275–287.
- Horn, P. L. 1997. An ageing methodology, growth parameters and estimates of mortality for Hake (*Merluccius australis*) from around the South Island, New Zealand. *Marine and Freshwater Research* 48:201–209.
- Horton, M., D. Parker, H. Winker, S. J. Lamberth, K. Hutchings, and S. E. Kerwath. 2019. Age, growth and per-recruit stock assessment of Southern Mullet *Chelon richardsonii* in Saldanha Bay and Langebaan Lagoon, South Africa. *African Journal of Marine Science* 41:313–324.
- Howland, K. L., M. Gendron, W. M. Tonn, and R. F. Tallman. 2004. Age determination of a long-lived coregonid from the Canadian North: Comparison of otoliths, fin rays and scales in Inconnu (*Stenodus leucichthys*). *Annales Zoologici Fennici* 41:205–214.
- Hoxmeier, R. J. H., D. D. Aday, and D. H. Wahl. 2001. Factors influencing precision of age estimation from scales and otoliths of Bluegills in Illinois reservoirs. *North American Journal of Fisheries Management* 21:374–380.
- Hubert, W. A., G. T. Baxter, and M. Harrington. 1987. Comparison of age determinations based on scales, otoliths and fin rays for Cutthroat Trout from Yellowstone Lake. *Northwest Science* 61:32–36.
- Hurley, K. L., R. J. Sheehan, and R. C. Heidinger. 2004. Accuracy and precision of age estimates for Pallid Sturgeon from pectoral fin rays. *North American Journal of Fisheries Management* 24:715–718.

- Hutchinson, C. E., and T. T. TenBrink. 2011. Age determination of the Yellow Irish Lord: Management implications as a result of new estimates of maximum age. *North American Journal of Fisheries Management* 31:1116–1122.
- Huveneers, C., J. Stead, M. B. Bennett, K. A. Lee, and R. G. Harcourt. 2013. Age and growth determination of three sympatric Wobbegong sharks: How reliable is growth band periodicity in Orectolobidae? *Fisheries Research* 147:413–425.
- Hyndes, G. A. 1992. Influence of sectioning otoliths on marginal increment trends and age and growth estimates for the Flathead *Platycephalus speculator*. *Fishery Bulletin, U.S.* 90:276–284.
- Ihde, T. F., and M. E. Chittenden Jr. 2002. Comparison of calcified structures for aging Spotted Seatrout. *Transactions of the American Fisheries Society* 131:634–642.
- Isermann, D. A., J. J. Breeggemann, and T. J. Paoli. 2018. Evaluation of anal fin spines, otoliths, and scales for estimating age and back-calculated lengths of Yellow Perch in southern Green Bay. *Journal of Great Lakes Research* 44:979–989.
- Isermann, D. A., J. R. Meerbeek, G. D. Scholten, and D. W. Willis. 2003. Evaluation of three different structures used for Walleye age estimation with emphasis on removal and processing times. *North American Journal of Fisheries Management* 23:625–631.
- Isermann, D. A., M. H. Wolter, and J. J. Breeggemann. 2010. Estimating Black Crappie age: An assessment of dorsal spines and scales as nonlethal alternatives to otoliths. *North American Journal of Fisheries Management* 30:1591–1598.
- Ishikawa, T., and K. Tachihara. 2012. Reproductive biology, growth, and age composition of non-native Indian Glassy Fish *Parambassis ranga* (Hamilton, 1822) in Haebaru Reservoir, Okinawa-Jima Island, southern Japan. *Journal of Applied Ichthyology* 28:231–237.
- Jackson, N. D., J. E. Garvey, and R. E. Colombo. 2007a. Comparing aging precision of calcified structures in Shovelnose Sturgeon. *Journal of Applied Ichthyology* 23:525–528.
- Jackson, Z. J., M. C. Quist, J. G. Larscheid, E. C. Thelen, and M. J. Hawkins. 2007b. Precision of scales and dorsal spines for estimating age of Common Carp. *Journal of Freshwater Ecology* 22:231–239.
- Jacobsen, I. P., and M. B. Bennett. 2010. Age and growth of *Neotrygon picta*, *Neotrygon annotata* and *Neotrygon kuhlii* from north-east Australia, with notes on their reproductive biology. *Journal of Fish Biology* 77:2405–2422.
- Jacobsen, I. P., and M. B. Bennett. 2011. Life history of the Blackspotted Whipray *Himantura astra*. *Journal of Fish Biology* 78:1249–1268.
- James, K. C. 2020. Vertebral growth and band-pair deposition in sexually mature Little Skates *Leucoraja erinacea*: Is adult band-pair deposition annual? *Journal of Fish Biology* 96:4–13.
- James, K. C., D. A. Ebert, L. J. Natanson, and G. M. Cailliet. 2014. Age and growth characteristics of the Starry Skate, *Raja stellulata*, with a description of life history and habitat trends of the central California, U.S.A., Skate assemblage. *Environmental Biology of Fishes* 97:435–448.
- Jefferson, A. E., R. J. Allman, A. E. Pacicco, J. S. Franks, F. J. Hernandez, M. A. Albins, S. P. Powers, R. L. Shipp, and J. M. Drymon. 2019. Age and growth of Gray Triggerfish (*Balistes capriscus*) from a north-central Gulf of Mexico artificial reef zone. *Bulletin of Marine Science* 95:177–195.
- Johnson, A. G., L. A. Collins, J. Dahl, and M. S. Baker. 1995. Age, growth, and mortality of Lane Snapper from the Northern Gulf of Mexico. *Proceedings of the Annual Conference of the Southeastern Fish and Wildlife Agencies* 49:178–186.
- Jurado-Ruzafa, A., and M. T. G. Santamaría. 2018. Age, growth and natural mortality of Blue Jack Mackerel *Trachurus picturatus* (Carangidae) from the Canary Islands, Spain (NW Africa). *African Journal of Marine Science* 40:451–460.

- Kastelle, C., T. Helser, T. TenBrink, C. Hutchinson, B. Goetz, C. Gburski, and I. Benson. 2020. Age validation of four rockfishes (genera *sebastes* and *sebastolobus*) with bomb-produced radiocarbon. *Marine and Freshwater Research* 71:1355–1366.
- Kehler, T., J. A. Sweka, J. Mohler, A. Higgs, and G. Kenney. 2018. Age and growth of juvenile Atlantic Sturgeon in the Lower Hudson River. *North American Journal of Fisheries Management* 38:84–95.
- Kelly, C. J., P. L. Connolly, and J. J. Bracken. 1997. Age estimation, growth, maturity and distribution of the Roundnose Grenadier from the Rockall trough. *Journal of Fish Biology* 50:1–17.
- Kendall, B. W., and C. A. Gray. 2009. Reproduction, age and growth of *Sillago maculata* in south-eastern Australia. *Journal of Applied Ichthyology* 25:529–536.
- Kendall, B. W., C. A. Gray, and D. Bucher. 2009. Age validation and variation in growth, mortality and population structure of *Liza argentea* and *Myxus elongatus* (Mugilidae) in two temperate Australian estuaries. *Journal of Fish Biology* 75:2788–2804.
- Khan, M. A., and S. Khan. 2009. Comparison of age estimates from scale, opercular bone, otolith, vertebrae and dorsal fin ray in *Labeo rohita* (Hamilton), *Catla catla* (Hamilton) and *Channa marulius* (Hamilton). *Fisheries Research* 100:255–259.
- Khan, M. A., S. Khan, I. Ahmed, and M. Nadeem. 2019. Age and growth of Spotted Snakehead, *Channa punctata* from the Ganga River. *Journal of Ichthyology* 59:197–204.
- Khan, M. A., S. Khan, and S. Khan. 2017. Precision of age estimates in Striped Snakehead *Channa striata* (Bloch, 1793) from the Ganga River and its tributaries (rivers Gomti and Yamuna). *Journal of Applied Ichthyology* 33:230–235.
- Khan, M. A., S. Khan, and K. Miyan. 2011a. Precision of aging structures for Indian Major Carp, *Cirrhinus mrigala*, from the River Ganga. *Journal of Freshwater Ecology* 26:231–239.
- Khan, M. A., A. Nazir, and U. Z. Banday. 2018. Utility of otolith weight to estimate age of *Labeo bata* (Actinopterygii: Cypriniformes: Cyprinidae) inhabiting the Ganga River. *Acta Ichthyologica et Piscatoria* 48:257–260.
- Khan, S., M. Afzal Khan, and K. Miyan. 2011b. Comparison of age estimates from otoliths, vertebrae, and pectoral spines in African Sharptooth Catfish, *Clarias gariepinus* (Burchell). *Estonian Journal of Ecology* 60:183–193.
- Khan, S., M. A. Khan, and K. Miyan. 2013. Evaluation of ageing precision from different structures of three threatened freshwater fish species, *Clarias batrachus*, *Heteropneustes fossilis* and *Wallago attu*. *Folia Zoologica* 62:103–109.
- Khan, S., M. A. Khan, K. Miyan, and F. A. Lone. 2015. Precision of age estimates from different ageing structures in selected freshwater teleosts. *Journal of Environmental Biology*:507–512.
- Killgore, K. J., J. J. Hoover, J. P. Kirk, S. G. George, B. R. Lewis, and C. E. Murphy. 2007. Age and growth of Pallid Sturgeon in the free-flowing Mississippi River. *Journal of Applied Ichthyology* 23:452–456.
- Kim, H. J., J. H. Na, and C.-W. Oh. 2016. Age and growth of Damsel fish *Chromis notata* (Temminck & Schlegel, 1843), Jeju Island, Korea. *Journal of Applied Ichthyology* 32:1179–1185.
- King, J., and R. McPhie. 2015. Preliminary age, growth and maturity estimates of Spotted Ratfish (*Hydrolagus colliei*) in British Columbia. *Deep Sea Research Part II: Topical Studies in Oceanography* 115:55–63.
- King, S. M., S. R. David, and J. A. Stein. 2018. Relative bias and precision of age estimates among calcified structures of Spotted Gar, Shortnose Gar, and Longnose Gar. *Transactions of the American Fisheries Society* 147:626–638.
- Klein, Z. B., T. F. Bonvechio, B. R. Bowen, and M. C. Quist. 2017. Precision and accuracy of age estimates obtained from anal fin spines, dorsal fin spines, and sagittal otoliths for known-age Largemouth Bass. *Southeastern Naturalist* 16:225–234.

- Klein, Z. B., M. M. Terrazas, and M. C. Quist. 2014. Age estimation of Burbot using pectoral fin rays, branchiostegal rays and otoliths. *Intermountain Journal of Sciences* 20:57–67.
- Koch, J. D., M. C. Quist, and K. A. Hansen. 2009. Precision of hard structures used to estimate age of Bowfin in the upper Mississippi River. *North American Journal of Fisheries Management* 29:506–511.
- Koch, J. D., K. D. Steffensen, and M. A. Pegg. 2011. Validation of age estimates obtained from juvenile Pallid Sturgeon *Scaphirhynchus albus* pectoral fin spines. *Journal of Applied Ichthyology* 27:209–212.
- Kocovsky, P. M., and R. F. Carline. 2000. A comparison of methods for estimating ages of unexploited Walleyes. *North American Journal of Fisheries Management* 20:1044–1048.
- Koenigs, R. P., R. M. Bruch, R. S. Stelzer, and K. K. Kamke. 2015. Validation of otolith ages for Walleye (*Sander vitreus*) in the Winnebago system. *Fisheries Research* 167:13–21.
- Korostelev, N. B., P. H. Frey, and A. M. Orlov. 2020. Using different hard structures to estimate the age of deep-sea fishes: A case study of the Pacific Flatnose, *Antimora microlepis* (Moridae, Gadiformes, Teleostei). *Fisheries Research* 232:105731.
- Korostelev, N., E. Vedishcheva, and A. Orlov. 2019. Age and growth of *Antimora rostrata* (Moridae, Gadiformes, Teleostei) from the Kerguelen and Crozet Islands in the southern Indian Ocean. *Polar Record* 55:452–459.
- Kotas, J. E., V. Mastrochirico, and M. Petrere Junior. 2011. Age and growth of the Scalloped Hammerhead Shark, *Sphyrna lewini* (Griffith and Smith, 1834), from the southern Brazilian coast. *Brazilian Journal of Biology* 71:755–761.
- Kotsiri, M., I. E. Batjakas, and P. Megalofonou. 2018. Age, growth and otolith morphometry of Atlantic Bonito (*Sarda sarda* Block, 1793) from the eastern Mediterranean Sea. *Acta Adriatica : International journal of Marine Sciences* 59:97–109.
- Kovacic, M. 2006. Age structure, growth and mortality of the Striped Goby, *Gobius vittatus* (Gobiidae) in the northern Adriatic Sea. *Scientia Marina* 70:635–641.
- Kruse, C. G., W. A. Hubert, and F. J. Rahel. 1997. Using otoliths and scales to describe age and growth of Yellowstone Cutthroat Trout in a high-elevation stream system, Wyoming. *Northwest Science* 71:30–38.
- Kruse, C., C. Guy, and D. Willis. 1993. Comparison of otolith and scale age characteristics for Black Crappies collected from South Dakota waters. *North American Journal of Fisheries Management* 13:856–858.
- Kusher, D. I., S. E. Smith, and G. M. Cailliet. 1992. Validated age and growth of the Leopard Shark, *Triakis semifasciata*, with comments on reproduction. *Environmental Biology of Fishes* 35:187–203.
- Labay, S. R., J. G. Kral, and S. M. Stukel. 2011. Precision of age estimates derived from scales and pectoral fin rays of Blue Sucker. *Fisheries Management and Ecology* 18:424–430.
- LaBay, S. R., and T. E. Lauer. 2006. An evaluation of the accuracy of age estimation methods for southern Lake Michigan Alewives. *North American Journal of Fisheries Management* 26:571–579.
- Lackmann, A. R., A. H. Andrews, M. G. Butler, E. S. Bielak-Lackmann, and M. E. Clark. 2019. Big-mouth Buffalo *Ictiobus cyprinellus* sets freshwater teleost record as improved age analysis reveals centenarian longevity. *Communications Biology* 2(1):1–14.
- Laine, A. O., W. T. Momot, and P. A. Ryan. 1991. Accuracy of using scales and cleithra for aging Northern Pike from an oligotrophic Ontario lake. *North American Journal of Fisheries Management* 11:220–225.
- La Mesa, M., F. Cali, E. Riginella, C. Mazzoldi, and C. D. Jones. 2020. Biological parameters of the High-Antarctic Icefish, *Cryodraco antarcticus* (Channichthyidae) from the South Shetland Islands. *Polar Biology* 43:143–155.
- La Mesa, M., F. Cali, F. Donato, E. Riginella, and C. Mazzoldi. 2018a. Aspects of the biology of the Antarctic Dragonfish *Gerlachea australis* (Notothenioidei: Bathydraconidae) in the Weddell Sea, Antarctica. *Polar Biology* 41:793–803.

- La Mesa, M., A. De Felice, C. D. Jones, and K.-H. Kock. 2009. Age and growth of Spiny Icefish (*Chaenodraco Wilsoni* Regan, 1914) off Joinville-Durville Islands (Antarctic Peninsula). *CCAMLR Science* 16:115–130.
- La Mesa, M., F. Donato, E. Riginella, and C. Mazzoldi. 2018b. Life history traits of a poorly known pelagic fish, *Aethotaxis mitopteryx* (Perciformes, Notothenioidei) from the Weddell Sea. *Polar Biology* 41:1777–1788.
- La Mesa, M., G. Scarcella, F. Grati, and G. Fabi. 2010. Age and growth of the Black Scorpionfish, *Scorpaena porcus* (Pisces: Scorpaenidae) from artificial structures and natural reefs in the Adriatic Sea. *Scientia Marina* 74(4):677–685.
- Lattuca, M., F. Llopart, E. Avigliano, M. Renzi, I. Leva, C. Boy, F. Vanella, M. Barrantes, D. Fernández, and C. Albuquerque. 2020. First insights into the growth and population structure of *Cottoperca trigloides* (Perciformes, Bovichtidae) from the southwestern Atlantic Ocean. *Frontiers in Marine Science* 7.
- Law, C. S. W., and Y. S. de Mitcheson. 2018. Age and growth of Black Seabream *Acanthopagrus schlegelii* (Sparidae) in Hong Kong and adjacent waters of the northern South China Sea. *Journal of Fish Biology* 93:382–390.
- Lepak, T. A., D. H. Ogle, and M. R. Vinson. 2017. Age, year-class strength variability, and partial age validation of Kiyis from Lake Superior. *North American Journal of Fisheries Management* 37:1151–1160.
- Lessa, R., and P. Duarte-Neto. 2004. Age and growth of Yellowfin Tuna (*Thunnus albacares*) in the western equatorial Atlantic, using dorsal fin spines. *Fisheries Research* 69:157–170.
- Lessa, R., and F. M. Santana. 2009. Age and growth of the Brazilian Sharpnose Shark, *Rhizoprionodon lalandii* and Caribbean Sharpnose Shark, *R. Porosus* (Elasmobranchii, Carcharhinidae) on the northern coast of Brazil (Maranhão). *Pan-American Journal of Aquatic Sciences* 4:532–544.
- Lessa, R., F. M. Santana, and F. H. Hazin. 2004. Age and growth of the blue shark *Prionace glauca* (Linnaeus, 1758) off northeastern Brazil. *Fisheries Research* 66:19–30.
- Lessa, R., F. M. Santana, and R. Paglerani. 1999. Age, growth and stock structure of the Oceanic Whitetip Shark, *Carcharhinus longimanus*, from the southwestern equatorial Atlantic. *Fisheries Research* 42:21–30.
- Li, X., Y. Chen, D. He, and F. Chen. 2008. Otolith characteristics and age determination of an endemic *Ptychobarbus dipogon* (Regan, 1905) (Cyprinidae: Schizothoracinae) in the Yarlung Tsangpo River, Tibet. *Environmental Biology of Fishes* 86:53.
- Liu, K.-M., R. D. Sibagariang, S.-J. Joung, and S.-B. Wang. 2018. Age and growth of the Shortfin Mako Shark in the southern Indian Ocean. *Marine and Coastal Fisheries* 10(6):577–589.
- Logsdon, D. E. 2007. Use of unsectioned dorsal spines for estimating Walleye ages. *North American Journal of Fisheries Management* 27:1112–1118.
- Lombardi-Carlson, L., G. Fitzhugh, C. Palmer, C. Gardner, R. Farsky, and M. Ortiz. 2008. Regional size, age and growth differences of Red Grouper (*Epinephelus morio*) along the west coast of Florida. *Fisheries Research* 91:239–251.
- Long, J. M., and W. L. Fisher. 2001. Precision and bias of Largemouth, Smallmouth, and Spotted Bass ages estimated from scales, whole otoliths, and sectioned otoliths. *North American Journal of Fisheries Management* 21:636–645.
- Long, J. M., C. T. Holley, and A. T. Taylor. 2018. Evaluation of ageing accuracy with complementary non-lethal methods for slow-growing, northern populations of Shoal Bass. *Fisheries Management and Ecology* 25:150–157.
- Long, J. M., and A. A. Nealis. 2017. Comparative precision of age estimates from two southern reservoir populations of Paddlefish [*Polyodon spathula* (Walbaum, 1792)]. *Journal of Applied Ichthyology* 33:819–820.
- Lorenzo, J. M., J. G. Pajuelo, M. Méndez-Villamil, J. Coca, and A. G. Ramos. 2002. Age, growth, reproduction and mortality of the Striped Seabream, *Lithognathus mormyrus* (Pisces, Sparidae), off the Canary Islands (Central-East Atlantic). *Journal of Applied Ichthyology* 18:204–209.

- Lowerre-Barbieri, S. K., M. E. C. Jr, and C. M. Jones. 1993. A comparison of a validated otolith method to age Weakfish, *Cynoscion regalis*, with the traditional scale method. *Fishery Bulletin* 92:555–568.
- Lozano, I. E., S. L. Vegh, A. A. Dománico, and A. E. Ros. 2014. Comparison of scale and otolith age readings for Trahira, *Hoplias malabaricus* (Bloch, 1794), from Paraná River, Argentina. *Journal of Applied Ichthyology* 30:130–134.
- Luque, P. L., E. Rodriguez-Marin, J. Landa, M. Ruiz, P. Quelle, D. Macias, and J. M. O. D. Urbina. 2014. Direct ageing of *Thunnus thynnus* from the eastern Atlantic Ocean and western Mediterranean Sea using dorsal fin spines. *Journal of Fish Biology* 84:1876–1903.
- Ma, B., Y. Nie, K. Wei, B. Xu, W. Gan, X. Zhu, J. Xu, L. Deng, and Y. Yao. 2017. Precision of age estimations from otolith, vertebra, and opercular bone of *Gymnocypris firmispinatus* (Actinopterygii: Cypriniformes: Cyprinidae) in the Anning River, China. *Acta Ichthyologica et Piscatoria* 47:321–329.
- Ma, B., Y. Nie, K. Wei, B. Xu, X. Zhu, and J. Xu. 2019. Estimates on age, growth, and mortality of *Gymnocypris firmispinatus* (Cyprinidae: Schizothoracinae) in the Anning River, China. *Journal of Oceanology and Limnology* 37:736–744.
- Ma, B., C. Xie, B. Huo, X. Yang, and P. Li. 2011. Age validation, and comparison of otolith, vertebra and opercular bone for estimating age of *Schizothorax o'connori* in the Yarlung Tsangpo River, Tibet. *Environmental Biology of Fishes* 90:159–169.
- Maceina, M. J., and S. M. Sammons. 2006. An evaluation of different structures to age freshwater fish from a northeastern US river. *Fisheries Management and Ecology* 13:237–242.
- Maciel, T. R., A. M. Vaz-dos-Santos, and M. Vianna. 2018. Can otoliths of *Genidens genidens* (Cuvier 1829) (Siluriformes: Ariidae) reveal differences in life strategies of males and females? *Environmental Biology of Fishes* 101:1589–1598.
- MacNeil, M. A., and S. E. Campana. 2002. Comparison of whole and sectioned vertebrae for determining the age of young Blue Shark (*Prionace glauca*). *Journal of Northwest Atlantic Fishery Science* 30:77–82.
- Malca, E., J. F. Barimo, J. E. Serafy, and P. J. Walsh. 2009. Age and growth of the Gulf Toadfish *Opsanus beta* based on otolith increment analysis. *Journal of Fish Biology* 75:1750–1761.
- Marriott, R., and M. Cappel. 2000. Comparative precision and bias of five different ageing methods for the Large Tropical Snapper *Lutjanus johnii*. *Asian Fisheries Science* 13:149–160.
- Marriott, R. J., and B. D. Mapstone. 2006. Geographic influences on and the accuracy and precision of age estimates for the Red Bass, *Lutjanus bohar* (Forsskal 1775): A large tropical reef fish. *Fisheries Research* 80:322–328.
- Matić-Skoko, S., J. Ferri, F. Škeljo, V. Bartulović, K. Glavić, and B. Glamuzina. 2011a. Age, growth and validation of otolith morphometrics as predictors of age in the Forkbeard, *Phycis phycis* (Gadidae). *Fisheries Research* 112:52–58.
- Matić-Skoko, S., P. Tutman, J. Dulčić, I. Prusina, Ž. Dođo, J. Pavličević, and B. Glamuzina. 2011b. Growth pattern of the endemic Neretvan Roach, *Rutilus basak* (Heckel, 1843) in the Hutovo Blato wetlands. *Journal of Applied Ichthyology* 27:813–819.
- Matta, M. E., and M. R. Baker. 2020. Age and growth of Pacific Sand Lance (*Ammodytes personatus*) at the latitudinal extremes of the Gulf of Alaska Large Marine Ecosystem. *Northwestern Naturalist* 101:34.
- May, C. J. 2005. Comparison of Techniques Used to Age Yellow Perch in Southern Lake Michigan. Bachelor's, Ball State University, Muncie, IN.
- McAuley, R. B., C. A. Simpfendorfer, G. A. Hyndes, R. R. Allison, J. A. Chidlow, S. J. Newman, and R. C. J. Lenanton. 2006. Validated age and growth of the Sandbar Shark, *Carcharhinus plumbeus* (Nardo 1827) in the waters off Western Australia. *Environmental Biology of Fishes* 77:385–400.
- McDowell, D. E., and E. Robillard. 2013. Life history characteristics and age validation of Southern Kingfish (*Menticirrhus americanus* (Linnaeus, 1758)) in the middle South Atlantic Bight. *Journal of Applied Ichthyology* 29:839–846.

- McInerney, M. C., R. J. H. Hoxmeier, and B. D. Koenen. 2019. Potential effects of age, population, and latitude on precision of scale and otolith age estimates of White Crappie in Minnesota. *Journal of Fish and Wildlife Management* 10:544–550.
- Meeuwig, M. H., and J. M. Bayer. 2005. Morphology and aging precision of statoliths from larvae of Columbia River basin Lampreys. *North American Journal of Fisheries Management* 25:38–48.
- Meneghesso, C., E. Riginella, M. L. Mesa, F. Donato, and C. Mazzoldi. 2013. Life-history traits and population decline of the Atlantic Mackerel *Scomber scombrus* in the Adriatic Sea. *Journal of Fish Biology* 83:1249–1267.
- Metcalf, S. J., and S. E. Swearer. 2005. Non-destructive ageing in *Notolabrus tetricus* using dorsal spines with an emphasis on the benefits for protected, endangered and fished species. *Journal of Fish Biology* 66:1740–1747.
- Méndez Villamil, M., J. M. Lorenzo, J. G. Pajuelo, A. Ramos, and J. Coca. 2002. Aspects of the life history of the Salema, *Sarpa salpa* (Pisces, Sparidae), off the Canarian Archipelago (Central-East Atlantic). *Environmental Biology of Fishes* 63:183–192.
- Miller, M. E., J. Stewart, and R. J. West. 2010. Using otoliths to estimate age and growth of a large Australian endemic monacanthid, *Nelusetta ayraudi* (Quoy and Gaimard, 1824). *Environmental Biology of Fishes* 88:263–271.
- Mofu, L., D. J. Woodford, R. J. Wasserman, and O. L. F. Weyl. 2020. Life history of the River Goby *Glossogobius callidus* (Teleostei: Gobiidae). *Journal of Fish Biology*.
- Moore, B. R. 2019. Age-based life history of Humpback Red Snapper, *Lutjanus gibbus*, in New Caledonia. *Journal of Fish Biology* 95:1374–1384.
- Moore, C., D. Lynch, M. Clarke, R. Officer, Jane Mills, J. Louis-Defour, and D. Brophy. 2019. Age verification of North Atlantic Sprat. *Fisheries Research* 213:144–150.
- Morehouse, R. L., S. B. Donabauer, and A. C. Grier. 2013. Estimating Largemouth Bass age: Precision and comparisons among scales, pectoral fin rays, and dorsal fin spines as nonlethal methods. *Fisheries and Aquaculture Journal* 4:074.
- Morrow, J. V., J. P. Kirk, K. J. Killgore, and S. G. George. 1998. Age, growth, and mortality of Shovelnose Sturgeon in the Lower Mississippi River. *North American Journal of Fisheries Management* 18:725–730.
- Mouine-Oueslati, N., R. Ahlem, C. Ines, M.-H. Ktari, and N. Chakroun-Marzouk. 2015. Age and growth of *Spondyliosoma cantharus* (Sparidae) in the Gulf of Tunis. *Scientia Marina* 79(3):319–324.
- Moulton, P. L., T. I. Walker, and S. R. Saddlier. 1992. Age and growth studies of Gummy Shark, *Mustelus antarcticus* Gunther, and School Shark, *Galeorhinus galeus* (Linnaeus), from Southern Australian Waters. *Marine and Freshwater Research* 43:1241–1267.
- Murie, D. J., and D. C. Parkyn. 2005. Age and growth of White Grunt (*Haemulon plumieri*): A comparison of two populations along the west coast of Florida. *Bulletin of Marine Science* 76:73–93.
- Murie, D. J., D. C. Parkyn, W. F. Loftus, and L. G. Nico. 2009a. Variable growth and longevity of Yellow Bullhead (*Ameiurus natalis*) in the Everglades of south Florida, USA. *Journal of Applied Ichthyology* 25:740–745.
- Murie, D. J., D. C. Parkyn, L. G. Nico, J. J. Herod, and W. F. Loftus. 2009b. Age, differential growth and mortality rates in unexploited populations of Florida Gar, an apex predator in the Florida Everglades. *Fisheries Management and Ecology* 16:315–322.
- Murie, D., D. Parkyn, C. Koenig, F. Coleman, J. Schull, and S. Frias-Torres. 2009c. Evaluation of finrays as a non-lethal ageing method for protected Goliath Grouper *Epinephelus itajara*. *Endangered Species Research* 7:213–220.
- Natanson, L. J., B. J. Gervelis, M. V. Winton, L. L. Hamady, S. J. B. Gulak, and J. K. Carlson. 2014. Validated age and growth estimates for *Carcharhinus obscurus* in the northwestern Atlantic Ocean, with pre- and post management growth comparisons. *Environmental Biology of Fishes* 97:881–896.

- Natanson, L. J., and N. E. Kohler. 1996. A preliminary estimate of age and growth of the Dusky Shark *Carcharhinus obscurus* from the South-West Indian Ocean, with comparisons to the western North Atlantic population. *South African Journal of Marine Science* 17:217–224.
- Natanson, L. J., J. J. Mello, and S. E. Campana. 2002. Validated age and growth of the Porbeagle Shark (*Lamna nasus*) in the western North Atlantic Ocean. *Fishery Bulletin* 100:266–278.
- Natanson, L. J., and G. B. Skomal. 2015. Age and growth of the White Shark, *Carcharodon carcharias*, in the western North Atlantic Ocean. *Marine and Freshwater Research* 66:387.
- Natanson, L. J., J. A. Sulikowski, J. R. Kneebone, and P. C. Tsang. 2007. Age and growth estimates for the Smooth Skate, *Malacoraja senta*, in the Gulf of Maine. *Environmental Biology of Fishes* 80:293–308.
- Nazir, A., and M. A. Khan. 2020. Stock-specific assessment of precise age and growth in the Long-Whiskered Catfish *Sperata aor* from the Ganges River. *Marine and Freshwater Research*.
- Neer, J. A., and B. A. Thompson. 2005. Life history of the Cownose Ray, *Rhinoptera bonasus*, in the northern Gulf of Mexico, with comments on geographic variability in life history traits. *Environmental Biology of Fishes* 73:321–331.
- Neer, J. A., B. A. Thompson, and J. K. Carlson. 2005. Age and growth of *Carcharhinus leucas* in the northern Gulf of Mexico: Incorporating variability in size at birth. *Journal of Fish Biology* 67:370–383.
- Nepal, V., M. C. Fabrizio, and W. J. Connelly. 2020. Phenotypic plasticity in life-history characteristics of invasive Blue Catfish, *Ictalurus furcatus*. *Fisheries Research* 230:105650.
- Neves, A., V. Sequeira, A. R. Vieira, R. B. Paiva, and L. S. Gordo. 2015. Age and growth of Small Red Scorpionfish, *Scorpaena notata* (Actinopterygii: Scorpaeniformes: Scorpaenidae), a common discard species from the Portuguese fishery. *Acta Ichthyologica et Piscatoria* 45:13–20.
- Neves, A., A. R. Vieira, V. Sequeira, R. B. Paiva, and L. S. Gordo. 2017. Modelling the growth of a protogynous sparid species, *Spondyllosoma cantharus* (Teleostei: Sparidae). *Hydrobiologia* 797:265–275.
- Newman, S. J. 2002. Age, growth, mortality and population characteristics of the Pearl Perch, *Glaucosoma buergeri* Richardson 1845, from deeper continental shelf waters off the Pilbara coast of north-western Australia. *Journal of Applied Ichthyology* 18:95–101.
- Nichols, R., E. Schemmel, and J. M. O'Malley. 2020. Development and assessment of an aging criteria for the main Hawaiian Islands Crimson Jobfish, *Pristipomoides filamentosus* (Opakapaka). NOAA, Technical Memorandum NMFS-PIFSC-110.
- Niewinski, B. C., and C. P. Ferreri. 1999. A comparison of three structures for estimating the age of Yellow Perch. *North American Journal of Fisheries Management* 19:872–877.
- Ochwada-Doyle, F. A., J. Stocks, L. Barnes, and C. A. Gray. 2014. Reproduction, growth and mortality of the exploited sillaginid, *Sillago ciliata* Cuvier, 1829. *Journal of Applied Ichthyology* 30:870–880.
- Oele, D. L., Z. J. Lawson, and P. B. McIntyre. 2015. Precision and bias in aging Northern Pike: Comparisons among four calcified structures. *North American Journal of Fisheries Management* 35:1177–1184.
- Officer, R. A., A. S. Gason, T. I. Walker, and J. G. Clement. 1996. Sources of variation in counts of growth increments in vertebrae from Gummy Shark, *Mustelus antarcticus*, and School Shark, *Galeorhinus galeus*: Implications for age determination. *Canadian Journal of Fisheries and Aquatic Sciences* 53:1765–1777.
- Ogino, Y., K. Furumitsu, T. Kiriya, and A. Yamaguchi. 2020. Using optimised otolith sectioning to determine the age, growth and age at sexual maturity of the herbivorous fish *Kyphosus bigibbus*: With a comparison to using scales. *Marine and Freshwater Research* 71:855.
- Ohta, I., Y. Akita, M. Uehara, and A. Ebisawa. 2017. Age-based demography and reproductive biology of three *epinephelus* groupers, *E. Polyphekadion*, *E. Tawvina*, and *E. Howlandi* (Serranidae), inhabiting coral reefs in Okinawa. *Environmental Biology of Fishes* 100:1451–1467.
- Ohta, I., and A. Ebisawa. 2016. Age-based demography and sexual pattern of the White-Streaked Grouper, *Epinephelus ongus* in Okinawa. *Environmental Biology of Fishes* 99:741–751.

- Ong, J. J. L., M. G. Meekan, H. H. Hsu, L. P. Fanning, and S. E. Campana. 2020. Annual bands in vertebrae validated by bomb radiocarbon assays provide estimates of age and growth of Whale Sharks. *Frontiers in Marine Science* 7.
- Oplinger, R. W. 2015. Hard structure aging precision and length-at-age data from two Northern Leatherside Chub populations. *Intermountain Journal of Sciences* 21:1–9.
- Oribe-Pérez, I. A., I. Velázquez-Abunader, and G. R. Poot-López. 2020. Age and multi-model growth estimation of White Grunt, *Haemulon plumieri*, in the southern Gulf of Mexico from otolith macrostructure analysis. *Regional Studies in Marine Science* 34:101069.
- Osman, Y. A. A., S. F. Mehanna, S. M. El-Mahdy, A. S. Mohammad, and K. Mahe. 2020. Age precision and growth rate of *Rhabdosargus haffara* (Forsskal, 1775) from Hurghada Fishing Area, Red Sea, Egypt. *Egyptian Journal of Aquatic Biology and Fisheries* 24:342–352.
- Ozcan, E., and N. Basusta. 2018. Preliminary study on age, growth and reproduction of *Mustelus mustelus* (Elasmobranchii: Carcharhiniformes: Triakidae) inhabiting the Gulf of Iskenderun, north-eastern Mediterranean Sea. *Acta Ichthyologica et Piscatoria* 48:27–36.
- Paiva, R. B., A. Neves, V. Sequeira, A. R. Vieira, M. J. Costa, I. Domingos, and L. S. Gordo. 2013. Age, growth and mortality of *Pontinus kuhlii* (Bowdich, 1825) (Scorpaeniformes: Scorpaenidae) in the Gorringe, Ampère, Unicorn and Lion seamounts. *Scientia Marina* 77(1):95–104.
- Paiva, R. B., A. Neves, V. Sequeira, A. R. Vieira, M. J. Costa, and L. S. Gordo. 2018. Age, growth and reproduction of the protandrous hermaphrodite fish, *Sarpa salpa*, from the Portuguese continental coast. *Journal of the Marine Biological Association of the United Kingdom* 98:269–281.
- Pajuelo, J. G., and J. M. Lorenzo. 2000. Biology of the Sand Smelt, *Atherina presbyter* (Teleostei: Atherinidae), off the Canary Islands (central-east Atlantic). *Environmental Biology of Fishes* 59:91–97.
- Pajuelo, J. G., and J. M. Lorenzo. 2003. The growth of the common Two-Banded Seabream, *Diplodus vulgaris* (Teleostei, Sparidae), in Canarian waters, estimated by reading otoliths and by back-calculation. *Journal of Applied Ichthyology* 19:79–83.
- Pajuelo, J. G., J. Socorro, J. A. González, J. M. Lorenzo, J. A. Perez-Penalvo, I. Martinez, and C. M. Hernandez-Cruz. 2006. Life history of the Red-Banded Seabream *Pagrus auriga* (Sparidae) from the coasts of the Canarian archipelago. *Journal of Applied Ichthyology* 22:430–436.
- Pajuelo, and Lorenzo. 2001. Biology of the Annular Seabream, *Diplodus annularis* (Sparidae), in coastal waters of the Canary Islands. *Journal of Applied Ichthyology* 17:121–125.
- Parr, R. T., R. B. Bringolf, and C. A. Jennings. 2018. Efficacy of otoliths and first dorsal spines for preliminary age and growth determination in Atlantic Tripletails. *Marine and Coastal Fisheries* 10:71–79.
- Parsons, K. T., J. Maisano, J. Gregg, C. F. Cotton, and R. J. Latour. 2018. Age and growth assessment of western North Atlantic Spiny Butterfly Ray *Gymnura altavela* (L. 1758) using computed tomography of vertebral centra. *Environmental Biology of Fishes* 101(1):137–151.
- Passerotti, M. S., T. E. Helser, I. M. Benson, B. K. Barnett, J. C. Ballenger, W. J. Bubley, M. J. M. Reichert, and J. M. Quattro. 2020. Age estimation of Red Snapper (*Lutjanus campechanus*) using FT-NIR spectroscopy: Feasibility of application to production ageing for management. *ICES Journal of Marine Science:fsaa131*.
- Payan-Alejo, J., M. L. Jacob-Cervantes, G. Rodríguez-Domínguez, J. Payan-Alejo, M. L. Jacob-Cervantes, and G. Rodríguez-Domínguez. 2020. Age and growth of thread herring *Opisthonema libertate*, in the southern Gulf of California. *Latin american journal of aquatic research* 48:15–22.
- Perry, R. C., and J. M. Casselman. 2012. Comparisons of precision and bias with two age interpretation techniques for opercular bones of Longnose Sucker, a long-lived northern fish. *North American Journal of Fisheries Management* 32:790–795.

- Phomikong, P., S. Seehirunwong, and T. Jutagate. 2019. A preliminary estimate of age and growth of two populations of dasyatid stingray *Urogymnus polylepis* in Thailand. *Journal of Fisheries and Environment* 43:43–54.
- Piercy, A. N., J. K. Carlson, J. A. Sulikowski, and G. H. Burgess. 2007. Age and growth of the Scalloped Hammerhead Shark, *Sphyrna lewini*, in the north-west Atlantic Ocean and Gulf of Mexico. *Marine and Freshwater Research* 58:34.
- Pilar Blanco Parra, M. del, F. G. Magana, and F. M. Farías. 2008. Age and growth of the Blue Shark, *Prionace glauca* Linnaeus, 1758, in the Northwest coast off Mexico. *Revista de biología marina y oceanografía* *Revista de Biología Marina y Oceanografía*(43):513–520.
- Polat, N., D. Bostanci, and S. Yilmaz. 2005. Differences between whole otolith and broken-burnt otolith ages of Red Mullet (*Mullus barbatus ponticus* Essipov, 1927) sampled from the Black Sea (Samsun, Turkey). *Turkish Journal of Veterinary and Animal Science* 29:429–433.
- Porcu, C., A. Bellodi, A. Cau, R. Cannas, M. F. Marongiu, A. Mulas, and M. C. Follesa. 2020. Uncommon biological patterns of a little known endemic Mediterranean skate, *Raja polystigma* (Risso, 1810). *Regional Studies in Marine Science* 34:101065.
- Porta, M. J., R. A. Snow, and D. E. Shoup. 2018. Comparison of Saugeye age estimates and population characteristics using otoliths and dorsal spines. *Journal of the Southeastern Association of Fish and Wildlife Agencies* 5:23–29.
- Power, G. R., P. A. King, C. J. Kelly, D. McGrath, E. Mullins, and O. Gullaksen. 2006. Precision and bias in the age determination of Blue Whiting, *Micromesistius poutassou* (Risso, 1810), within and between age-readers. *Fisheries Research* 80:312–321.
- Puchala, E. A., D. L. Parrish, and D. H. Ogle. 2018. Size and age of stonecats in Lake Champlain; estimating growth at the margin of their range to aid in population management. *North American Journal of Fisheries Management* 38.
- Qin, X., T. Wang, P. Lin, X. Wang, H. Liu, and R. Nash. 2018. Age, growth, mortality and movement patterns of Shortjaw Tapertail Anchovy, *Coilia brachygnathus*, in the channel connecting Dongting Lake and the Yangtze River in central China. *Aquatic Living Resources* 31:1–N.PAG.
- Quist, M. C., Z. J. Jackson, M. R. Bower, and W. A. Hubert. 2007. Precision of hard structures used to estimate age of riverine Catostomids and Cyprinids in the upper Colorado River basin. *North American Journal of Fisheries Management* 27:643–649.
- Raitaniemi, J., E. Bergstrand, L. Flöystad, R. Hokki, E. Kleiven, M. Rask, M. Reizenstein, R. Saksgård, and C. Ångström. 1998. The reliability of Whitefish (*Coregonus lavaretus* (L.)) Age determination - differences between methods and between readers. *Ecology of Freshwater Fish* 7:25–35.
- Ramírez-Pérez, J. S., C. Quiñonez-Velázquez, L. A. Abitia-Cardenas, and F. N. Melo-Barrera. 2011. Age and growth of Sailfish *Istiophorus platypterus* (Shaw in Shaw and Nodder, 1792) from Mazatlan, Sinaloa, Mexico. *Environmental Biology of Fishes* 92:187–196.
- Ribot-Carballal, M., F. Galván-Magaña, and C. Quiñónez-Velázquez. 2005. Age and growth of the Shortfin Mako Shark, *Isurus oxyrinchus*, from the western coast of Baja California Sur, Mexico. *Fisheries Research* 76:14–21.
- Rien, T. A., and R. C. Beamesderfer. 1994. Accuracy and precision of White Sturgeon age estimates from pectoral fin rays. *Transactions of the American Fisheries Society* 123:255–265.
- Robillard, S. R., and J. E. Marsden. 1996. Comparison of otolith and scale ages for Yellow Perch from Lake Michigan. *Journal of Great Lakes Research* 22:429–435.
- Robinson, J. M., K. J. Jirka, and J. A. Chiotti. 2010. Age and growth analysis of the Central Mudminnow, *Umbra limi* (Kirtland, 1840). *Journal of Applied Ichthyology* 26:89–94.
- Rolim, F. A., Z. A. Siders, F. P. Caltabellotta, M. M. Rotundo, and T. Vaske-Júnior. 2020. Growth and derived life history characteristics of the Brazilian Electric Ray *Narcine brasiliensis*. *Journal of Fish Biology*.

- Romine, J. G., R. D. Grubbs, and J. A. Musick. 2006. Age and growth of the Sandbar Shark, *Carcharhinus plumbeus*, in Hawaiian waters through vertebral analysis. *Environmental Biology of Fishes* 77:229–239.
- Rosa, D., F. Mas, A. Mathers, L. J. Natanson, J. Carlson, and R. Coelho. 2018. Age and growth of Shortfin Mako in the South Atlantic. *Collective Volume of Scientific Papers-International Commission for the Conservation of Atlantic Tunas* 75:457–475.
- Ross, J. R., J. D. Crosby, and J. T. Kosa. 2005. Accuracy and precision of age estimation of Crappies. *North American Journal of Fisheries Management* 25:423–428.
- Rovani, A. T., and L. G. Cardoso. 2017. Life history and initial assessment of fishing impacts on the by-catch species *Dules auriga* (Teleostei: Serranidae) in southern Brazil. *Journal of Fish Biology* 91:896–911.
- Sabah, and M. A. Khan. 2014. Precise age estimation and growth of three Schizothoracinae fishes from Kashmir valley. *Zoology and Ecology* 24:16–25.
- Sakaris, P. C., J. J. Sunga, and J. N. Coover. 2019. Comparison of otoliths and scales in estimating age of Redbreast Sunfish and Green Sunfish in the Yellow River Watershed, Georgia. *Journal of the Southeastern Association of Fish and Wildlife Agencies* 6:44–50.
- Sammons, S. M. 2020. Age, growth, and fishery assessment of Spotted Sand Bass in the northern Gulf of California, Mexico. *Journal of Applied Ichthyology*.
- Sanchez, P. J., J. P. Pinsky, and J. R. Rooker. 2019. Bomb radiocarbon age validation of Warsaw Grouper and Snowy Grouper. *Fisheries* 44:524–533.
- Santana, F. M., and R. Lessa. 2004. Age determination and growth of the Night Shark (*Carcharhinus signatus*) off the northeastern Brazilian coast. *Fishery Bulletin* 102:156–167.
- Scarcella, G., M. La Mesa, F. Grati, and P. Polidori. 2011. Age and growth of the Small Red Scorpionfish, *Scorpaena notata* Rafinesque, 1810, based on whole and sectioned otolith readings. *Environmental Biology of Fishes* 91:369.
- Schill, D. J., E. R. J. M. Mamer, and G. W. LaBar. 2010. Validation of scales and otoliths for estimating age of Redband Trout in high desert streams of Idaho. *Environmental Biology of Fishes* 89:319–332.
- Schwamborn, S. H. L., and B. P. Ferreira. 2002. Age structure and growth of the Dusky Damselfish, *Stegastes fuscus*, from Tamandare´ reefs, Pernambuco, Brazil. *Environmental Biology of Fishes* 63:79–88.
- Sci, A., H. Ayyildiz, A. Altın, and B. Kızılkaya. 2020. Age and growth of Red Porgy, *Pagrus pagrus* from the island of Gökçeada, North Aegean Sea. *Aquatic Sciences and Engineering* 35:57–63.
- Seibert, J. R., and Q. E. Phelps. 2013. Evaluation of aging structures for Silver Carp from Midwestern U.S. Rivers. *North American Journal of Fisheries Management* 33:839–844.
- Semba, Y., H. Nakano, and I. Aoki. 2009. Age and growth analysis of the Shortfin Mako, *Isurus oxyrinchus*, in the western and central North Pacific Ocean. *Environmental Biology of Fishes* 84:377–391.
- Serra-Pereira, B., I. Figueiredo, P. Bordalo-Machado, I. Farias, T. Moura, and L. S. Gordo. 2005. Age and growth of *Raja clavata* Linnaeus, 1758 – evaluation of ageing precision using different types of caudal denticles. *ICES CM 2005/N:17 - Elasmobranch Fisheries Science*:1–10.
- Sharp, D., and D. R. Bernard. 1988. Precision of estimated ages of Lake Trout from five calcified structures. *North American Journal of Fisheries Management* 8:367–372.
- Shih, N.-T., K.-C. Hsu, and I.-H. Ni. 2011. Age, growth and reproduction of Cutlassfishes *trichiurus* spp. In the southern East China Sea. *Journal of Applied Ichthyology* 27:1307–1315.
- Shimose, T., and A. Nanami. 2014. Age, growth, and reproductive biology of Blacktail Snapper, *Lutjanus fulvus*, around the Yaeyama Islands, Okinawa, Japan. *Ichthyological Research* 61:322–331.
- Shimose, T., and A. Nanami. 2015. Age, growth, and reproduction of Blackspot Snapper *Lutjanus fulviflam-mus* (Forsskål 1775) around Yaeyama Islands, southern Japan, between 2010 and 2014. *Journal of Applied Ichthyology* 31:1056–1063.

- Silva, E. A., and D. J. Stewart. 2006. Age structure, growth and survival rates of the commercial fish *Prochilodus nigricans* (bocachico) in North-Eastern Ecuador. *Environmental Biology of Fishes* 77:63–77.
- Simpfendorfer, C. A., J. Chidlow, R. McAuley, and P. Unsworth. 2000. Age and Growth of the Whiskery Shark, *Furgaleus macki*, from Southwestern Australia. *Environmental Biology of Fishes* 58:335–343.
- Simpfendorfer, C. A., R. B. McAuley, J. Chidlow, and P. Unsworth. 2002. Validated age and growth of the Dusky Shark, *Carcharhinus obscurus*, from western Australian waters. *Marine and Freshwater Research* 53:567–573.
- Sipe, A. M., and M. E. Chittenden Jr. 2001. A comparison of calcified structures for aging summer flounder, *Paralichthys dentatus* Scientific Publications Office. *Fisheries Bulletin* 99:628–640.
- Sipe, A. M., and M. E. Chittenden Jr. 2002. A comparison of calcified structures for aging Bluefish in the Chesapeake Bay region. *Transactions of the American Fisheries Society* 131:783–790.
- Skomal, G. B., and L. J. Natanson. 2003. Age and growth of the Blue Shark, *Prionace glauca*, in the north Atlantic Ocean. *Fisheries Bulletin, U.S.* 101:627–639.
- Smith, B. J., D. J. Dembkowski, D. A. James, and M. R. Wuellner. 2016. A simple method to reduce interpretation error of ages estimated from otoliths. *The Open Fish Science Journal* 9:1–7.
- Smylie, M., V. Shervette, and C. McDonough. 2016. Age, growth, and reproduction in two coastal populations of Longnose Gars. *Transactions of the American Fisheries Society* 145:120–135.
- Snow, R. A., M. J. Porta, and J. M. Long. 2018. Precision of four otolith techniques for estimating age of White Perch from a thermally altered reservoir. *North American Journal of Fisheries Management* 38:725–733.
- Soekoe, M., F. van der Bank, and N. Smit. 2013. Determining the most suitable method of otolith preparation for estimating the age of Tigerfish, *Hydrocynus vittatus* in the Pongolapoort Dam, South Africa. *African Zoology* 48:187–192.
- Soeth, M., L. F. Fávaro, H. L. Spach, F. A. Daros, A. E. Woltrich, and A. T. Correia. 2019. Age, growth, and reproductive biology of the Atlantic Spadefish *Chaetodipterus faber* in southern Brazil. *Ichthyological Research* 66:140–154.
- Sotola, V. A., G. A. Maynard, E. M. Hayes-Pontius, T. B. Mihuc, M. H. Malchoff, and J. E. Marsden. 2014. Precision and bias of using opercles as compared to otoliths, dorsal spines, and scales to estimate ages of Largemouth and Smallmouth Bass. *Northeastern Naturalist* 21:565–573.
- Soupir, C. A., B. B. Blackwell, and M. L. Brown. 1997. Relative precision among calcified structures for White Bass age and growth assessment. *Journal of Freshwater Ecology* 12:531–538.
- Spiegel, J. R., M. C. Quist, and J. E. Morris. 2010. Precision of scales and pectoral fin rays for estimating age of Highfin Carpsucker, Quillback Carpsucker, and River Carpsucker. *Journal of Freshwater Ecology* 25:271–278.
- Stevenson, J. T., and D. H. Secor. 2000. Age determination and growth of Hudson River Atlantic Sturgeon, *Acipenser oxyrinchus*. *Fishery Bulletin* 98:153–166.
- Stewart, J., and J. M. Hughes. 2007. Age validation and growth of three commercially important hemiramphids in south-eastern Australia. *Journal of Fish Biology* 70:65–82.
- Stewart, J., W. Sumpton, M. Lockett, and J. M. Hughes. 2013. Age-based demographics of the Pearl Perch *Glaucosoma scapulare* (Ramsay, 1881). *Journal of Applied Ichthyology* 29:801–807.
- Stewart, N. D., M. J. Dadswell, P. Leblanc, R. G. Bradford, C. Ceapa, and M. J. W. Stokesbury. 2015. Age and growth of Atlantic Sturgeon from the Saint John River, New Brunswick, Canada. *North American Journal of Fisheries Management* 35:364–371.
- Stewart, T. R., D. H. Ogle, O. T. Gorman, and M. R. Vinson. 2016. Age, growth, and size of Lake Superior Pygmy Whitefish (*Prosopium coulterii*). *The American Midland Naturalist* 175:24–36.

- Stolarski, J. T., and K. J. Hartman. 2008. An evaluation of the precision of fin ray, otolith, and scale age determinations for Brook Trout. *North American Journal of Fisheries Management* 28:1790–1795.
- Stolarski, J. T., and T. M. Sutton. 2013. Precision analysis of three aging structures for amphidromous Dolly Varden from Alaskan arctic rivers. *North American Journal of Fisheries Management* 33:732–740.
- Stransky, C., S. Gudmundsdottir, T. Sigurdsson, S. Lemvig, K. Nedreaas, and F. Saboridorey. 2005. Age determination and growth of Atlantic redfish (*Sebastes marinus* and *S. Mentella*): Bias and precision of age readers and otolith preparation methods. *ICES Journal of Marine Science* 62:655–670.
- Sulikowski, J. A., S. B. Irvine, K. C. DeValerio, and J. K. Carlson. 2007. Age, growth and maturity of the Roundel Skate, *Raja texana*, from the Gulf of Mexico, USA. *Marine and Freshwater Research* 58:41–53.
- Sulikowski, J. A., J. Kneebone, S. Elzey, J. Jurek, P. D. Danley, W. H. Howell, and P. C. W. Tsang. 2005a. Age and growth estimates of the Thorny Skate (*Amblyraja radiata*) in the western Gulf of Maine. *Fisheries Bulletin*, U.S. 103:161–168.
- Sulikowski, J. A., M. D. Morin, S. H. Suk, and W. H. Howell. 2003. Age and growth estimates of the Winter Skate (*Leucoraja ocellata*) in the western Gulf of Maine. *Fisheries Bulletin* 101:405–413.
- Sulikowski, J. A., P. C. W. Tsang, and W. H. Howell. 2005b. Age and size at sexual maturity for the Winter Skate, *Leucoraja ocellata*, in the western Gulf of Maine based on morphological, histological and steroid hormone analyses. *Environmental Biology of Fishes* 72:429–441.
- Sun, C.-L., S.-P. Wang, and S.-Z. Yeh. 2002. Age and growth of the Swordfish (*Xiphias gladius* L.) In the waters around Taiwan determined from anal-fin rays. *Fishery Bulletin* 100:822–835.
- Sun, C.-L., S.-Z. Yeh, C.-S. Liu, N.-J. Su, and W.-C. Chiang. 2015. Age and growth of Black Marlin (*Istiompax indica*) off eastern Taiwan. *Fisheries Research* 166:4–11.
- Škeljo, F., J. Brčić, V. Vuletin, and J. Ferri. 2015. Age and growth of the Axillary Wrasse, *Symphodus mediterraneus* (L.) From the eastern Adriatic Sea. *Marine Biology Research* 11:780–784.
- Škeljo, F., J. Ferri, J. Brčić, M. Petrić, and I. Jardas. 2012. Age, growth and utility of otolith morphometrics as a predictor of age in the Wrasse *Coris julis* (Labridae) from the eastern Adriatic Sea. *Scientia Marina* 76:587–595.
- Taylor, T. N., B. K. Cross, and B. C. Moore. 2019. Investigating nonlethal age estimation in a lentic Brook Trout population. *North American Journal of Fisheries Management* 39:1385–1394.
- Temple, A. J., S. M. Stead, N. Jiddawi, N. Wambiji, N. K. Dulvy, E. Barrowclift, and P. Berggren. 2020. Life-history, exploitation and extinction risk of the data-poor Baraka's Whipray (*Maculabatis ambigua*) in small-scale tropical fisheries. *Journal of Fish Biology* 97:708–719.
- Terwilliger, M. R., T. Reece, and D. F. Markle. 2010. Historic and recent age structure and growth of endangered Lost River and Shortnose Suckers in Upper Klamath Lake, Oregon. *Environmental Biology of Fishes* 89:239–252.
- Thompson, K. R., and D. W. Beckman. 1995. Validation of age estimates from White Sucker otoliths. *Transactions of the American Fisheries Society* 124:637–639.
- Thornton, J. L., V. N. Kc, L. D. Frankland, C. R. Jansen, J. Hirst, and R. E. Colombo. 2018. Monitoring demographics of a commercially exploited population of Shovelnose Sturgeon in the Wabash River, Illinois/Indiana, USA. *Journal of Applied Ichthyology*.
- Tičina, V., and S. Matić-Skoko. 2012. Age, growth and mortality of Scaldfish (*Arnoglossus laterna* Walbaum, 1792) from the Adriatic Sea. *Journal of Applied Ichthyology* 28:836–841.
- Torres-Palacios, K., P. A. Mejia-Falla, A. F. Navia, V. H. Cruz-Escalona, R. Felix-Uraga, and C. Quinonez-Velazquez. 2019. Age and growth parameters of the Panamic Stingray (*Urotrygon aspidura*). *Fishery Bulletin* 117:169–180.
- Trested, D. G., and J. J. Isely. 2011. Age, growth, mortality, and abundance of Lake Sturgeon in the Grasse River, New York, USA. *Journal of Applied Ichthyology* 27:13–19.

- Tribuzio, C. A., M. E. Matta, C. Gburski, C. Blood, W. Bubley, and G. H. Kruse. 2018. Are Pacific Spiny Dogfish lying about their age? A comparison of ageing structures for *Squalus suckleyi*. *Marine and Freshwater Research* 69:37–47.
- Tuset, V. M., J. A. González, I. E. Lozano, and M. M. Garcia-Diaz. 2004. Age and growth of the Blacktail Comber, *Serranus atricauda* (Serranidae), off the Canary Islands (central-eastern Atlantic). *Bulletin of Marine Science* 74:53–68.
- Tyszkowski, S. M., and J. J. Pritt. 2017. Comparing otoliths and scales as structures used to estimate ages of Largemouth Bass: Consequences of biased age estimates. *North American Journal of Fisheries Management* 37:1075–1082.
- Uehara, M., A. Ebisawa, and I. Ohta. 2020. Comparative age-specific demography of four commercially important deep-water snappers: Implication for fishery management of a long-lived lutjanid. *Journal of Fish Biology* 97:121–136.
- Uzunova, E. P., K. Ignatov, and R. Petrova. 2020. Comparison of age estimates from scales, fin rays, and otoliths of the introduced Peipsi Whitefish, *Coregonus maraenoides* (Actinopterygii: Salmoniformes: Salmonidae), collected from the Iskar Reservoir (Danube River Basin). *Acta Ichthyologica et Piscatoria; Szczecin* 50:13–21.
- Vandergoot, C. S., M. T. Bur, and K. A. Powell. 2008. Lake Erie Yellow Perch age estimation based on three structures: Precision, processing times, and management implications. *North American Journal of Fisheries Management* 28:563–571.
- van der Meulen, D. E., R. J. West, and C. A. Gray. 2013. An assessment of otoliths, dorsal spines and scales to age the Long-Finned Gurnard, *Lepidotrigla argus*, Ogilby, 1910 (Family: Triglidae). *Journal of Applied Ichthyology* 29:815–824.
- Vieira, A. R., I. Farias, I. Figueiredo, A. Neves, B. Morales-Nin, V. Sequeira, M. R. Martins, and L. S. Gordo. 2009. Age and growth of Black Scabbardfish (*Aphanopus carbo* lowe, 1839) in the southern NE Atlantic. *scimar* 73(S2):33–46.
- Vilizzi, L. 2018. Age determination in Common Carp *Cyprinus carpio*: History, relative utility of ageing structures, precision and accuracy. *Rev Fish Biol Fisheries* 28:461–484.
- Vilizzi, L., and K. Walker. 1999. Age and growth of the Common Carp, *Cyprinus carpio*, in the River Murray, Australia: Validation, consistency of age interpretation, and growth models. *Environmental Biology of Fishes* 54:77–106.
- Vilizzi, L., K. Walker, T. Jain, D. McGlennon, and V. Tsymbal. 1998. Interpretability and precision of annulus counts for calcified structures in Carp, *Cyprinus carpio* L. *Fundamental and Applied Limnology* 143:121–127.
- Vinyard, E. A., B. S. Frazier, J. M. Drymon, J. J. Gelsleichter, and W. J. Bubley. 2019. Age, growth, and maturation of the Finetooth Shark, *Carcharhinus isodon*, in the western North Atlantic Ocean. *Environmental Biology of Fishes* 102:1499–1517.
- Visconti, V., E. D. L. Trip, M. H. Griffiths, and K. D. Clements. 2018. Life-history traits of the Leatherjacket *Meuschenia scaber*, a long-lived monacanthid. *Journal of Fish Biology* 92:470–486.
- Visnjic-Jeftic, Z., M. Lenhardt, I. Navodaru, A. Hegedis, Z. Gacic, and M. Nikcevic. 2009. Reproducibility of age determination by scale and vertebra in Pontic Shad (*Alosa pontica* Eichwald, 1838), from the Danube. *Archives of Biological Sciences* 61:337–341.
- Walsh, M. G., A. P. Maloy, and T. P. O'Brien. 2008. Comparison of Rainbow Smelt age estimates from fin rays and otoliths. *North American Journal of Fisheries Management* 28:42–49.
- Wang, T., D. Huang, Y. Zhao, H. Wang, S. Hu, and J. Shen. 2013. Age, growth and mortality of invasive Sharpbelly, *Hemiculter leucisculus* (Basilewsky, 1855) in Erhai Lake, China. *Journal of Applied Ichthyology* 29:1279–1285.

- Watkins, C. J., Z. B. Klein, M. M. Terrazas, and M. C. Quist. 2015a. Influence of sectioning location on age estimates from Common Carp dorsal spines. *North American Journal of Fisheries Management* 35:690–697.
- Watkins, C. J., T. J. Ross, R. S. Hardy, and M. C. Quist. 2015b. Precision of hard structures used to estimate age of Mountain Whitefish (*Prosopium williamsoni*). *Western North American Naturalist* 75:1–7.
- Weber, M. J., and M. L. Brown. 2011. Comparison of Common Carp (*Cyprinus carpio*) age estimates derived from dorsal fin spines and pectoral fin rays. *Journal of Freshwater Ecology* 26:195–202.
- Welch, T. J., M. J. van den Avyle, R. K. Betsill, and E. M. Driebe. 1993. Precision and relative accuracy of Striped Bass age estimates from otoliths, scales, and anal fin rays and spines. *North American Journal of Fisheries Management* 13:616–620.
- Wells, R. D., S. Kohin, S. L. Teo, O. E. Snodgrass, and K. Uosaki. 2013. Age and growth of North Pacific Albacore (*Thunnus alalunga*): Implications for stock assessment. *Fisheries Research* 147:55–62.
- Whiteman, K. W., V. H. Travnichek, M. L. Wildhaber, A. DeLonay, D. Papoulias, and D. Tillett. 2004. Age estimation for Shovelnose Sturgeon: A cautionary note based on annulus formation in pectoral fin rays. *North American Journal of Fisheries Management* 24:731–734.
- Williamson, C. W., and R. R. Dirnberger. 2010. A comparison of techniques using dorsal spines to estimate Sauger age. *North American Journal of Fisheries Management* 30:1016–1019.
- Willmes, M., E. E. Jacinto, L. S. Lewis, R. A. Fichman, Z. Bess, G. Singer, A. Steel, P. Moyle, A. L. Rypel, N. Fangue, J. J. G. Glessner, J. A. Hobbs, and E. D. Chapman. 2020. Geochemical tools identify the origins of Chinook Salmon returning to a restored creek. *Fisheries*.
- Wilson, C. A., and D. L. Nieland. 2001. Age and growth of Red Snapper, *Lutjanus campechanus*, from the Northern Gulf of Mexico off Louisiana. *Fishery Bulletin* 99:653–664.
- Winker, H., O. L. F. Weyl, A. J. Booth, and B. R. Ellender. 2010. Validating and corroborating the deposition of two annual growth zones in asteriscus otoliths of Common Carp *Cyprinus carpio* from South Africa's largest impoundment. *Journal of Fish Biology* 77:2210–2228.
- Wintner, S. P. 2000. Preliminary study of vertebral growth rings in the Whale Shark, *Rhincodon typus*, from the east coast of South Africa. *Environmental Biology of Fishes* 59:441–451.
- Wintner, S. P., S. F. J. Dudley, N. Kistnasamy, and B. Everett. 2002. Age and growth estimates for the Zambezi Shark, *Carcharhinus leucas*, from the east coast of South Africa. *Marine and Freshwater Research* 53:557–566.
- Yamaguchi, A., T. Taniuchi, and M. Shimizu. 1996. Age and Growth of the Starspotted Dogfish *Mustelus manazo* from Tokyo Bay, Japan. *Fisheries science* 62:919–922.
- Yates, J. R., C. J. Watkins, and M. C. Quist. 2016. Evaluation of hard structures used to estimate age of Common Carp. *Northwest Science* 90:195–205.
- Yigin, C. C., and A. Ismen. 2016. Age and growth of Spiny Dogfish *Squalus acanthias* (Squalidae: Chondrichthyes) in the North Aegean Sea. *Pakistan Journal of Zoology* 48:1185–1191.
- Zhang, Z.-M., C.-X. Xie, H.-P. Ding, C.-J. Liu, X.-F. Ma, and L.-G. Cai. 2016. Age and growth of Bream *Abramis brama* (Linnaeus, 1758) in the downstream section of Irtysh River in China. *Journal of Applied Ichthyology* 32:105–109.
- Zhiming, Z., D. Huiping, and X. Congxin. 2018. Comparison of five calcified structures for estimating the age of Bream *Abramis brama* (L.) From the Irtysh River in China. *Turkish Journal of Fisheries and Aquatic Sciences* 18:845–852.
- Zhu, G., M. Duan, L. Wei, R. Trebilco, S. Bestley, and A. Walters. 2020. Determination and precision of otolith growth zone estimates of *Electrona antarctica* in the Southern Kerguelen Plateau region in the Indian sector of the Southern Ocean. *Deep Sea Research Part II: Topical Studies in Oceanography* 174:104778.

Zhu, X., R. J. Wastle, K. L. Howland, D. J. Leonard, S. Mann, T. J. Carmichael, and R. F. Tallman. 2015. A comparison of three anatomical structures for estimating age in a slow-growing subarctic population of Lake Whitefish. *North American Journal of Fisheries Management* 35:262–270.

Zymonas, N. D., and T. E. McMahon. 2009. Comparison of pelvic fin rays, scales and otoliths for estimating age and growth of Bull Trout, *Salvelinus confluentus*. *Fisheries Management and Ecology* 16:155–164.

Ignore After This

```
## Writing 336 Bibtex entries ... OK
## Results written to file '../data/LitReview.bib'
## ignoring entry 'coulson_life_nodate' (line 415) because :
## A bibentry of bibtype 'Article' has to specify the field: year
##
## Writing 107 Bibtex entries ... OK
## Results written to file '../data/LitReview.bib'
```

Acre et al. (2017) Adams and Kerstetter (2014) Al-Rasady et al. (2013) Albuquerque et al. (2019) Allman et al. (2018) Allman, Robert J. et al. (2005) Anderson et al. (1992a) Anderson et al. (1992b) Andrade (2004) Andrade et al. (2019) Andrews et al. (1999) Andrews et al. (2005) Anislado-Tolentino et al. (2008) Artero et al. (2015) Aschenbrenner and Ferreira (2015) Aschenbrenner et al. (2017) Ayyildiz et al. (2019) Ba et al. (2015) Baje et al. (2018) Baje et al. (2019) Baker et al. (2019) Baker and McComish (1998) Balazik et al. (2012) Barada et al. (2011) Barbieri et al. (1994) Bargione et al. (2019) Barnett et al. (2020) Barreto et al. (2011) Barrientos et al. (2019) Basusta and Aslan (2018) Başusta et al. (2017) Bauerlien et al. (2018) Beckman et al. (1988) Beckman et al. (1990) Beckman (2002) Bellodi et al. (2017) Ben-Aderet et al. (2020) Besler (1999) Bettinger and Crane (2011) Bishop et al. (2006) Blackwell et al. (2016) Blackwell et al. (2019) Bokhutlo et al. (2015) Bostanci et al. (2009) Bostanci (2008) Bostanci et al. (2015) Boughamou (2014) Boxrucker (1986) Braaten et al. (2015) Braaten et al. (1999) Braccini et al. (2007) Bradley and Arkhipkin (2020) Branigan et al. (2019) Breeggemann et al. (2014) Brenden et al. (2006) Brennan and Cailliet (1989) Brouder (2005) Brown et al. (2004) Brusher and Schull (2009) Bubley et al. (2012) Buckmeier et al. (2018) Buckmeier et al. (2012) Buckmeier et al. (2002) Burton et al. (2019) Butler et al. (2021) Bwanika et al. (2007) Calis et al. (2005) Caltabellotta et al. (2019) Carlson and Parsons (1997) Carlson and Baremore (2005) Carmo et al. (2018) Casselman et al. (2019) Catterson et al. (2020) Cavole et al. (2018) Cazorla and Sidorkewicz (2011) Cerdaneres-Ladrón De Guevara et al. (2011) Cervantes-Gutiérrez et al. (2018) Charvet et al. (2018) Chater et al. (2018) Chater et al. (2015) Chen et al. (2012) Choat and Axe (1996) Cicia et al. (2009) Coelho and Erzini (2008) Coiraton et al. (2019) Colombo et al. (2010) Conrath et al. (2002) Copeland et al. (2007) Corsso et al. (2020) Coulson et al. (2020) Coulson et al. (2016) Coulson (2019) Cuevas-Zimbrón et al. (2013) Currey et al. (2013) Dahl et al. (2019) Daley and Leaf (2019) Davis et al. (2007) Dawson et al. (2009) de Santana and Minte-Vera (2017) de Santana et al. (2016) Debicella (2005) Degsera et al. (2020) Delgado et al. (2013) DeMartini et al. (2007) DeMartini et al. (2017) Dembkowski et al. (2017) Di Maio et al. (2020) Doño et al. (2015) Driggers et al. (2004) Duan et al. (2014) Dulčić et al. (2011) Dutka-Gianelli and Murie (2001) Dzul et al. (2012) Efitre et al. (2016) Eklund et al. (2000) Ellender et al. (2012) Elzey et al. (2014) Erhardt and Scarnecchia (2013) Erickson (1983) Esteves et al. (1995) Ewing et al. (2003) Ewing et al. (2007) Farley et al. (2013) Farrell et al. (2010) Faust et al. (2015) Faust et al. (2013) Feitosa et al. (2017) Fernando et al. (2014) Ferri et al. (2017) Flain and Glova (1988) Fleming and Stark (2018) Flinn et al. (2019) Florin et al. (2018) Fogg et al. (2019) Fossen et al. (2003) Francis and Maolagáin (2000) Francis et al. (2001) Frazier et al. (2014) Freitas et al. (2019) French et al. (2014) Fujinami et al. (2018) Gallagher et al. (2016) Gallagher and Nolan (1999) Gallagher et al. (2006) García-Mederos et al. (2010) Gaygusuz (2018) Gburski et al. (2007) Gebremedhin et al. (2019) Geraghty et al. (2014) Geraghty et al. (2012) Gillanders et al. (1999) Girgin and Basusta (2020) Girgin and Başusta (2016) Glass et al. (2011) Goldman and Musick (2006) Goldman et al. (2006) Goosen and Smale (1997) Grabowski et al. (2012) Grant et al. (2018) Gray et al. (2010) Grebel and Cailliet (2010) Gregg et al. (2006) Griffin et al. (2017) Gu et al. (2013) Gumus et al. (2007) Gutteridge et al. (2013) Haas and Recksiek (1995) Haas et al. (2016) Haglund and Mitro (2017) Hale and Baremore (2013) Hammers and Miranda (1991) Harris (2020) Harry et al. (2013) Heimbrand et al. (2020) Helser et al. (2019) Henderson et al. (2004) Herbst and Marsden (2011) Hill et al. (1989) Hining et al. (2000) Hobbs et al. (2014) Hogan-West et al. (2020) Holmes et al. (2015) Horn (2002) Horn (1997) Horton et al. (2019) Howland et al. (2004) Hoxmeier et al. (2001) Hubert et al. (1987) Hurley et al. (2004) Hutchinson and TenBrink (2011) Huveneers et al. (2013)

Hyndes (1992) Ihde and Chittenden Jr (2002) Isermann et al. (2010) Isermann et al. (2003) Isermann et al. (2018) Ishikawa and Tachihara (2012) Jackson et al. (2007a) Jackson et al. (2007b) Jacobsen and Bennett (2010) Jacobsen and Bennett (2011) James et al. (2014) James (2020) Jefferson et al. (2019) Johnson et al. (1995) Jurado-Ruzafa and Santamaría (2018) Kastle et al. (2020) Kehler et al. (2018) Kelly et al. (1997) Kendall et al. (2009) Kendall and Gray (2009) Khan et al. (2019) Khan and Khan (2009) Khan et al. (2011b) Khan et al. (2013) Khan et al. (2011a) Khan et al. (2015) Khan et al. (2017) Khan et al. (2018) Killgore et al. (2007) Kim et al. (2016) King and McPhie (2015) King et al. (2018) Klein et al. (2014) Klein et al. (2017) Koch et al. (2009) Koch et al. (2011) Kocovsky and Carline (2000) Koenigs et al. (2015) Korostelev et al. (2019) Korostelev et al. (2020) Kotas et al. (2011) Kotsiri et al. (2018) Kovacic (2006) Kruse et al. (1993) Kruse et al. (1997) Kusher et al. (1992) La Mesa et al. (2009) La Mesa et al. (2010) La Mesa et al. (2018a) La Mesa et al. (2020) La Mesa et al. (2018b) LaBay and Lauer (2006) Labay et al. (2011) Lackmann et al. (2019) Laine et al. (1991) Lattuca et al. (2020) Law and Mitcheson (2018) Lepak et al. (2017) Lessa et al. (1999) Lessa et al. (2004) Lessa and Duarte-Neto (2004) Lessa and Santana (2009) Li et al. (2008) Liu et al. (2018) Logsdon (2007) Lombardi-Carlson et al. (2008) Long and Nealis (2017) Long et al. (2018) Long and Fisher (2001) Lorenzo et al. (2002) Lowerre-Barbieri et al. (1993) Lozano et al. (2014) Luque et al. (2014) Ma et al. (2011) Ma et al. (2019) Ma et al. (2017) Maceina and Sammons (2006) Maciel et al. (2018) MacNeil and Campana (2002) Malca et al. (2009) Marriott and Cappel (2000) Marriott and Mapstone (2006) Matić-Skoko et al. (2011a) Matić-Skoko et al. (2011b) Matta and Baker (2020) May (2005) McAuley et al. (2006) McDowell and Robillard (2013) McNerny et al. (2019) Meeuwig and Bayer (2005) Méndez Villamil et al. (2002) Meneghesso et al. (2013) Metcalf and Swearer (2005) Miller et al. (2010) Mofu et al. (2020) Moore et al. (2019) Moore (2019) Morehouse et al. (2013) Morrow et al. (1998) Mouine-Oueslati et al. (2015) Moulton et al. (1992) Murie and Parkyn (2005) Murie et al. (2009b) Murie et al. (2009c) Murie et al. (2009a) Natanson et al. (2007) Natanson and Skomal (2015) Natanson and Kohler (1996) Natanson et al. (2002) Natanson et al. (2014) Nazir and Khan (2020) Neer et al. (2005) Neer and Thompson (2005) Nepal et al. (2020) Neves et al. (2015) Neves et al. (2017) Newman (2002) Nichols et al. (2020) Niewinski and Ferreri (1999) Ochwada-Doyle et al. (2014) Oele et al. (2015) Officer et al. (1996) Ogino et al. (2020) Ohta and Ebisawa (2016) Ohta et al. (2017) Ong et al. (2020) Oplinger (2015) Oribe-Pérez et al. (2020) Osman et al. (2020) Ozcan and Basusta (2018) Paiva et al. (2013) Paiva et al. (2018) Pajuelo and Lorenzo (2000) Pajuelo and Lorenzo (2001) Pajuelo and Lorenzo (2003) Pajuelo et al. (2006) Parr et al. (2018) Pilar Blanco Parra et al. (2008) Parsons et al. (2018) Passerotti et al. (2020) Payan-Alejo et al. (2020) Perry and Casselman (2012) Phomikong et al. (2019) Piercy et al. (2007) Polat et al. (2005) Porcu et al. (2020) Porta et al. (2018) Power et al. (2006) Puchala et al. (2018) Qin et al. (2018) Quist et al. (2007) Raitaniemi et al. (1998) Ramírez-Pérez et al. (2011) Ribot-Carballal et al. (2005) Rien and Beamesderfer (1994) Robillard and Marsden (1996) Robinson et al. (2010) Rolim et al. (2020) Romine et al. (2006) Rosa et al. (2018) Ross et al. (2005) Rovani and Cardoso (2017) Sabah and Khan (2014) Sakaris et al. (2019) Sammons (2020) Sanchez et al. (2019) Santana and Lessa (2004) Scarcella et al. (2011) Schill et al. (2010) Schwamborn and Ferreira (2002) Sci et al. (2020) Seibert and Phelps (2013) Semba et al. (2009) Serra-Pereira et al. (2005) Sharp and Bernard (1988) Shih et al. (2011) Shimose and Nanami (2014) Shimose and Nanami (2015) Silva and Stewart (2006) Simpfendorfer et al. (2000) Simpfendorfer et al. (2002) Sipe and Chittenden Jr (2001) Sipe and Chittenden Jr (2002) Škeljo et al. (2012) Škeljo et al. (2015) Skomal and Natanson (2003) Smith et al. (2016) Smylie et al. (2016) Snow et al. (2018) Soekoe et al. (2013) Soeth et al. (2019) Sotola et al. (2014) Soupir et al. (1997) Spiegel et al. (2010) Stevenson and Secor (2000) Stewart and Hughes (2007) Stewart et al. (2015) Stewart et al. (2016) Stewart et al. (2013) Stolarski and Hartman (2008) Stolarski and Sutton (2013) Stransky et al. (2005) Sulikowski et al. (2003) Sulikowski et al. (2005b) Sulikowski et al. (2005a) Sulikowski et al. (2007) Sun et al. (2002) Sun et al. (2015) Taylor et al. (2019) Temple et al. (2020) Terwilliger et al. (2010) Thompson and Beckman (1995) Thornton et al. (2018) Tičina and Matić-Skoko (2012) Torres-Palacios et al. (2019) Trested and Isely (2011) Tribuzio et al. (2018) Tuset et al. (2004) Tyszko and Pritt (2017) Uehara et al. (2020) Uzunova et al. (2020) van der Meulen et al. (2013) Vandergoot et al. (2008) Vieira et al. (2009) Vilizzi and Walker (1999) Vilizzi (2018) Vilizzi et al. (1998) Vinyard et al. (2019) Visconti et al. (2018) Visnjic-Jeftic et al. (2009) Walsh et al. (2008) Wang et al. (2013) Watkins et al. (2015a) Watkins et al. (2015b) Weber and Brown (2011) Welch et al. (1993) Wells et al. (2013) Whiteman et al. (2004) Williamson and Dirnberger (2010) Willmes et al. (2020) Wilson and Nieland (2001) Winker et al. (2010) Wintner et al. (2002) Wintner (2000) Yamaguchi et al. (1996) Yates et al. (2016) Yigin and Ismen (2016) Zhang et al. (2016) Zhiming et al. (2018) Zhu et al.

(2015) Zhu et al. (2020) Zymonas and McMahon (2009)