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A BIBLIOGRAPHY OF ANOMALIES OF FISHES:
SUPPLEMENT 3

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ABSTRACT This third supplement adds 158 titles to "A Bibliography of Anomalies of Fishes," which was originally published in this journal in 1964; the first supplement followed in 1966 and the second supplement, in 1971. Citations now total 1498 in the series.

This listing adds 158 titles to those of the original bibliography and previous supplements [*Gulf Res. Repts.* 1(6), 1964; *ibid.* 2(2):169-176, 1966; *ibid.* 3(2):215-239, 1971]. Of these, 124 were published during the 1970-75 period. A total of 1498 citations are now included in this series. As in previous supplements, titles are serially numbered

and prefixed by the letter "S"; the prefix is omitted from index listings. Corrections to be made in previous sections are indicated under Corrigenda.

We wish to express our continued appreciation to colleagues providing reprints of their papers or otherwise contributing to this project.

BIBLIOGRAPHY

- S-305 Abe, T. 1972. On a cyclopic embryo of the blue shark. *UO* 9(9):1-3, 4 figs.
- S-306 _____ 1972a. An example of xanthochroism in *Paralichthys olivaceus* (Temminck and Schlegel) (Bothidae, Pleuronectiformes). *UO* 12:1-2, fig.
- S-307 _____ 1972b. A hermaphroditic chum salmon from northern Japan. *UO* 13:1-2, fig.
- S-308 _____ 1972c. A partially albinistic specimen of *Limanda yokohamae* (Günther). *UO* 14:1-2, fig.
- S-309 Agrawal, V. P. & Km. Shalini Raj. 1968. Abnormalities in the ovary of *Mastacembelus armatus*. *Nat. Acad. Sci., India, Ann. Number* 1967: 136.
- S-310 Amoaka, K., S. Nishikawa & N. Tanaka. 1974. Sexual dimorphism and an abnormal intersexual specimen in the bothid flounder *Bothus pantherinus*. *Jap. J. Ichthyol.* 21(1):16-20.
- S-311 Anderson, W. D., Jr. 1972. Notes on western Atlantic lutjanid fishes of the genera *Pristipomoides* and *Etelis*. *Copeia* 1972(2):359-361.
- S-312 Anon. 1969. Albinism in rainbow trout. *Progr. Fish Cult.* 31(1):61.
- S-313 Austin, H. M. & C. R. Hickey, Jr. 1973. Spinal curvature in the Atlantic silversides, *Menidia menidia* (Linnaeus), and the Atlantic menhaden, *Brevoortia tyrannus* (Latrobe). *Chesapeake Sci.* 14(2):146-147, 2 figs.
- S-314 Babu Rao, M. 1975. An abnormal specimen of *Thryssa malabaricus* (Bloch) (Pisces: Engraulidae) without pelvic fins. *Curr. Sci.* 44(9):313.
- S-315 _____ & N. K. Sinha. 1968. On an abnormal specimen of *Dendrophysa hooghliensis* Sinha and Babu Rao (Sciaenidae: Pisces) with three anal spines. *J. Mar. biol. Ass. India* 10(1969):174-175, fig.
- S-316 Bahamonde N., N. & C. Canino A. 1953. Un ejemplar de *Calliclinus geniguttatus* (Valenciennes). *Invest. Zool. Chilenas* 2(1):11-13, 2 figs.
- S-317 Baxter, J. L. 1954. A kelp bass, *Paralabrax clathratus* (Girard), with abnormal fins. *Calif. Fish Game* 40(1):78-79.
- S-318 Behnke, R. J. & T. M. Kloppel. 1975. An expression of unequal twinning in an adult rainbow trout. *Copeia* 1975(4):775-777.
- S-319 Bensam, P. 1968. Further instances of gonadal peculiarities in *Sardinella longiceps* Valenciennes. *J. Mar. biol. Ass. India* 10(1):172-174.
- S-320 Berland, B. 1971. Piggha og lundefugl med gum-mistrikk. (Dogfish and puffin with rubber bands). *Fauna, Oslo* 24:35-37, fig.
- S-321 Böhlke, J. E. & J. E. McCosker. 1975. The status of the ophichthid eel genera *Caecula* Vahl and *Sphagebranchus* Bloch, and the description of a new genus and species from fresh waters in Brazil. *Proc. Acad. Nat. Sci. Phila.* 127(1):1-11, 7 figs.
- S-322 Bortone, S.A. 1971. Pugheadedness in the vermilion snapper, *Rhomboplites aurorubens*, in the northern Gulf of Mexico. *Trans. Amer. Fish. Soc.* 1971(2):366-368, 2 figs.
- S-323 _____ 1972. Pugheadedness in the pirate perch, *Aphredoderus sayanus* (Pisces: Aphredoderidae), with implications on feeding. *Chesapeake Sci.* 13(3):231-232, fig.
- S-324 Bream, R. A. & E. L. King, Jr. 1971. Albinism in lampreys in the upper Great Lakes. *Copeia* 1971(1):176-179.
- S-325 Brunel, P. 1971. Deux cas d'ambicoloration partielle chez la plie, *Hippoglossoides platessoides* (Pisces, Heterosomata) dans le golfe du Saint-Laurent. *Naturaliste can.* 98:937-939, fig.
- S-326 Buchanan, J. P. & H. E. Bryant. 1973. The occurrence of a predorsal stripe in the black crappie,

- Pomoxis nigromaculatus*. *J. Ala. Acad. Sci.* 44(4): 293–297, 3 figs.
- S-327 Bucke, D. 1974. Vertebral abnormalities in common bream *Abramis brama* (L.). *J. Fish. Biol.* 6(5):681–682.
- S-328 Burgess, G. H. & F. J. Schwartz. 1975. Anomalies encountered in freshwater and marine fishes from the eastern United States. *ASB Bull.* 22(2):44.
- S-329 Cavicchioli, G. 1971. Forme teratologiche nei pesci: due casi di gemelli siamesi in *Xiphophorus (Platypoecilus) maculatus* Günther (Teleostei: Poeciliidae). *Ann. Univ. Ferrara. N.S.* 3(7):63–68, 2 figs.
- S-330 Chabanaud, P. 1929. Remarques sur divers poissons de la famille des Syngnathidae et description de deux especes nouvelles de l'Inde Archipelagique. *Bull. Soc. Zool. Fr.* 54:165–172, 5 figs.
- S-331 Chew, R. L. 1973. Pugheadedness in the Florida largemouth bass *Micropterus salmoides floridanus* (Lesueur). *Quart. J. Fla. Acad. Sci.* 36(2–4): 201–204.
- S-332 Coad, B. W. 1974. Vertebral frequencies with notes on anomalies in samples of threespine sticklebacks (*Gasterosteus aculeatus* L.). *Canad. Fld. Nat.* 88(2):220–223.
- S-333 ———, P. J. Rubec & S. U. Qadri. 1974. Deformed vertebral columns in the brown bullhead, *Ictalurus nebulosus* (Lesueur), from the Ottawa River. *Canad. Fld. Nat.* 88(2):224–226.
- S-334 Cohen, D. M. & S. P. Atsides. 1969. Additions to a revision of argentine fishes. *Fish. Bull., U. S.* 68(1):13–36, 14 figs.
- S-335 Cohen, J. L. 1973. An albino grey smoothhound *Mustelus californicus* Gill. *Calif. Fish Game* 59(3): 210–211.
- S-336 Dahlberg, M. D. 1970. A completely reversed black-cheek tonguefish, *Symphurus plagiusa*, from Duplin River, Georgia. *Chesapeake Sci.* 11(4):260–261.
- S-337 Dawson, C. E. 1974. A review of the Microdesmidae (Pisces: Gobiioidea). 1. *Cerdale* and *Clarkichthys* with descriptions of three new species. *Copeia* 1974(2):409–448, 24 figs.
- S-338 Demory, R. L. 1972. Tailless dover sole from off the Oregon coast. *Calif. Fish Game* 58(2):147–148, fig.
- S-339 Dorairaj, K. 1973. Hermaphroditism in the thread-fin fish, *Polynemus microstoma* Bleeker. *Indian J. Fish.* 20(1):256–269.
- S-340 Duncker, G. 1904. Die fische der malayischen Halbinsel. *Mitt. Naturh. Mus., Hamburg* 21(1903): 135–207, 2 pl.
- S-341 Forrester, C. R. 1969. Sinistrality in *Platichthys stellatus* off British Columbia. *J. Fish. Res. Bd. Canada* 26:191–196.
- S-342 ——— & M. S. Smith. 1971. Ambicoloration in a petrale sole (*Eopsetta jordani*). *J. Fish. Res. Bd. Canada* 28(10):1672–1674.
- S-343 Gandolfi, G., E. Caronna & P. Orsini. 1969. Ermafroditismo in *Mugil saliens* Risso (Pisces, Mugilidae). *Boll. Pesca Piscic. Indrobiol.* 24:61–70, 1 pl., 3 figs.
- S-344 Gannon, J. E. & R. P. Howmiller, 1973. Ecological notes on paddlefish (*Polyodon spathula*) with short rostrums. *Mich. Acad.* 6(2):217–222.
- S-345 Godoy, M. P. 1971. Um caso de hermafroditismo em piava *Leporinus copelandii* Steindachner, 1875 (Pisces, Anostomidae, Heterognathi). *Rev. bras. Biol.* 31(1):107–111.
- S-346 Gopalan, U. K. 1971. On two abnormal sharks from Gujarat. *J. Bombay nat. Hist. Soc.* 68: 465–476, fig.
- S-347 Gordon, M. 1972. Mortality of albino embryo and aberrant Mendelian ratios in certain broods of *Xiphophorus hellerii*. *Zoologica, N. Y.* 27:73–74.
- S-348 Greenfield, D. W., S. T. Ross & G. D. Deckert. 1970. Some aspects of the life history of the Santa Ana sucker, *Catostomus (Pantosteus) santaanae* (Snyder). *Calif. Fish Game* 56:166–179, 8 figs.
- S-349 Grinstead, B. G. 1971. Effects of pugheadedness on growth and survival of striped bass, *Morone saxatilis* (Walbaum), introduced into Canton Reservoir, Oklahoma. *Proc. Okla. Acad. Sci.* 51:8–12, 4 figs.
- S-350 Gupta, M. V. 1969. Abnormalities in pelvic fins and girdles of *Eleutheronema tetradactylum* Shaw. *Sci. & Cult.* 35(2):70–71, 3 figs.
- S-351 Gupta, T. R. C. 1973. Intestinal abnormality in the ribbon fish, *Trichiurus lepturus* Linnaeus. *Indian J. Fish.* 20(1):233.
- S-352 Haaker, P. L. 1972. First record of a reversed butter sole, *Isopsetta isolepis*. *Calif. Fish Game* 58(3): 244–245.
- S-353 ——— 1973. Ambicoloration in some California flatfishes. *Calif. Fish Game* 59(4):299–304, 5 figs.
- S-354 ——— & E. D. Lane. 1973. Frequencies of anomalies in a bothid, *Paralichthys californicus* and a pleuronectid, *Hypopsetta guttulata*, flatfish. *Copeia* 1973(1):22–25, 3 figs.
- S-355 Haider, S. & A. G. Sathyanesan. 1973. An instance of abnormal disposition of pituitary components in the teleost *Puntius sophore* (Ham.). *Anat. Anz.* 133(1/2):68–72.
- S-356 Halliday, R. G. 1969. Distribution and regional variation of *Argentina sphyraena* (Pisces: Isospondyli). *J. Mar. biol. Ass. U. K.* 49(1):189–208, 4 figs.
- S-357 Hambrick, P. S., W. T. Bryson & C. H. Hocutt. 1974. New anomalies in three cyprinid genera from southwest Virginia. *Trans. Amer. Fish. Soc.* 103(3):642.
- S-358 Hauser, W. J. 1975. A hermaphroditic mountain sucker *Catostomus platyrhynchus*. *Copeia* 1975 (4):775.
- S-359 Hettler, W. F., Jr. 1971. A yellowfin menhaden without pelvic fins. *Quart. J. Fla. Acad. Sci.* 34:63–66.
- S-360 ——— 1972. An anomalous *Sphyraena barracuda*. *Chesapeake Sci.* 13(4):326, figs.

- S-361 Hickey, C. R., Jr. 1972. Common abnormalities in fishes, their causes and effects. *Tech. Rep. N. Y. Ocean Sci. Lab.* 0013, 1–20, 5 figs.
- S-362 ——— 1974. Fish deformities in Long Island waters. *Underw. Nat.* 8(4):26–27, 2 pl.
- S-363 ——— & R. A. Amish. 1975. Stunted growth of a jawless striped bass, *Morone saxatilis*. *Trans. Amer. Fish. Soc.* 104(2):410–412, 3 figs.
- S-364 ——— & H. M. Austin. 1974. Pugheadedness in the bluefish. *N. Y. Fish Game J.* 21(2):188–189, 2 figs.
- S-365 Holder, D. R. & J. S. Ramsey. 1972. A case of albinism in the tadpole madtom, *Noturus gyrinus*. *Trans. Amer. Fish. Soc.* 101(3):567.
- S-366 Honma, Y. 1968. Teratological observations on *Acheilognathus* species and hybrids (Cyprinidae). III. Uncommon deformities in eight adult specimens of bitterling. *Trans. Roy. Soc. S. Afr.* 38(1):39–44.
- S-367 ——— & I. Ikeda. 1971. A pug-headed specimen of black porgy, *Acanthopagrus schlegeli*, from the river-mouth of Asa-kawa, Shikoku. *Jap. J. Ichthyol.* 18(4):36–38, 3 figs.
- S-368 ——— & C. Sugihara. 1971. A stingray, *Dasyatis akajei*, with aberrant pectoral fins from the Japan Sea. *Jap. J. Ichthyol.* 18(4):187–189.
- S-369 James, P. S. & M. Badrudeen. 1969. On certain anomalies in the fishes of the family Leiognathidae. *J. Mar. biol. Ass. India* 10(1):107–113, 14 figs.
- S-370 Jenkins, T. M. 1969. Observations on color changes of brown and rainbow trout (*Salmo trutta* and *S. gairdneri*) in stream habitats, with description of an unusual color pattern in brown trout. *Trans. Amer. Fish. Soc.* 98:517–519, 1 pl.
- S-371 Kalyamurthy, M. 1970. On the regeneration of caudal fin in *Gerres limbatus* Cuvier from Pulicat Lake. *J. Inland Fish. Soc. India, Barrackpore* 1:137:138.
- S-372 Kroger, R. L. & J. F. Guthrie. 1971. Incidence of crooked vertebral columns in juvenile Atlantic menhaden, *Brevoortia tyrannus*. *Chesapeake Sci.* 12(4):276–278.
- S-373 ——— 1973. Additional anomalous menhaden and other fishes. *Chesapeake Sci.* 14(2):112–116, 10 figs.
- S-374 Lamont, J. M. 1961. Fish with rubber bands. *Scottish Fish. Bull.* 15:17–18, 2 pls.
- S-375 Lazarus, S. 1974. On some gonadal abnormalities in *Sardinella dayi* Regan, *S. clupeoides* (Bleeker) and *S. sirm* (Walbaum). *J. Mar. biol. Ass. India* 15(1):442–444, fig.
- S-376 Leggett, W. C. 1969. Pugheadedness in landlocked Atlantic salmon (*Salmo salar*). *J. Fish. Res. Bd. Canada* 26(11):3091–3093, fig.
- S-377 Lingner, D. 1973. O anomalie a sistemului neurosecretor caudal la *Scophthalmus maeoticus* (Pallas 1831). *Stud. Cercet. Biol., Ser. Zool.* 25(5):455–459.
- S-378 Love, M. S. & J. Vucci. 1973. Partial ambicoloration in three California flatfishes. *Calif. Fish Game* 59(2):146–148, 3 figs.
- S-379 ——— 1973. Eratta. *Calif. Fish Game* 59(3):216.
- S-380 Lozano Cabo, F. 1969. Nota sobre un caso de bicefalismo en la tintorera [*Prionace glauca* (L.)], capturada en las inmediaciones de las Islas Chafarinas. *Bol. Real. Soc. Espan. Hist. Natur. Sec. Biol.* 67(1/2):27–28, fig.
- S-381 Lubieniecki, B. 1972. [A case of hermaphroditism in Baltic herring (*Clupea harengus* L.)]. *Przeegl. Zool.* 16(4):420–422.
- S-382 Lux, F. E. 1973. White spotting in the 1959 year-class of Georges Bank winter flounder, *Pseudopleuronectes americanus* (Walbaum). *Trans. Amer. Fish. Soc.* 102(1):83–88.
- S-383 ——— & J. V. Mahoney. 1972. Predation by bluefish on flatfishes. *Mar. Fish. Rev.* 34(7–8):30–35, 4 figs.
- S-384 Machado Cruz, J. A. 1969. [A tentative etiological diagnosis of wounds in tuna *Thunnus albacares* (Bonnaterre) from Angola]. *Junta Invest. Ultramar. Notas Cen. Biol. Aqua Trop.* 15:1–13, 6 figs. (In Portuguese with English synopsis).
- S-385 Marichamy, R. 1970. On certain abnormalities in the short-jaw anchovy *Thrissina baelama* (Forskål) (Family Engraulidae). *J. Mar. biol. Ass. India* 10(2):395–397, 2 figs.
- S-386 Matsusato, T. 1973. (On the skeletal abnormalities in marine fishes. 1. The abnormal marine fishes collected along the coast of Hiroshima Pref.). *Bull. Nansei Reg. Fish. Res. Lab.* 6:17–18.
- S-387 McCleave, J. D. & S. M. Fried. 1974. Three unusual shortnose sturgeons (*Acipenser brevirostrum*) from Montsweag Bay, Maine. *Canad. Fld. Nat.* 88(3):358–360.
- S-388 McIlwain, T. D. & R. Waller. 1972. An xanthochroic gar, *Lepisosteus oculatus*, from Mississippi. *Trans. Amer. Fish. Soc.* 101(2):362.
- S-389 Menzel, B. W. 1974. A mouthless carp from Texas. *Trans. Amer. Fish. Soc.* 103(1):142–143, fig.
- S-390 ——— & D. M. Green. 1972. A color mutant of the chain pickerel, *Esox niger* (Lesueur). *Trans. Amer. Fish. Soc.* 101(2):370–372.
- S-391 Merriner, J. V. 1972. A hermaphroditic alewife, *Alosa pseudoharengus*, from the Rapahannock River, Virginia. *Copeia* 1972(3):597, fig.
- S-392 ——— & W. L. Wilson. 1972. Jaw deformity (cross-bite) of Atlantic menhaden, *Brevoortia tyrannus*, from Virginia. *Chesapeake Sci.* 13(1):62–63.
- S-393 Minckley, C. O. & H. E. Klaassen. 1969. Life history of the plains killifish, *Fundulus kansae* (Garman), in the Smoky Hill River, Kansas. *Trans. Amer. Fish. Soc.* 98(3):460–465, 4 figs.
- S-394 Misra, P. M. 1966. Sex characteristics and morphological abnormalities of brook trout (*Salvelinus fontinalis*). *Proc. Pa. Acad. Sci.* 39:121–123.

- S-395 Moe, M. A., Jr. 1969. Biology of the red grouper *Epinephelus morio* (Valenciennes) from the eastern Gulf of Mexico. *Fla. Dept. Natur. Resour. Mar. Res. Lab., Prof. Pap. Ser.* 10:x + 95 pp. Illus.
- S-396 Monod, T. 1973. Sur un poisson énigmatique provenant d'Eilat (Mer Rouge). *Bull. Sea Fish. Res. Stn., Israel* 60:5-8.
- S-397 Moore, C. J. & C. R. Posey, Sr. 1972. First records of sinistrality in the hogchoker, *Trinectes maculatus* (Bloch and Schneider), and partial albinism within a reversed American heterosomate. *Chesapeake Sci.* 13(4):324-325, fig.
- S-398 ——— 1974. Pigmentation and morphological abnormalities in the hogchoker, *Trinectes maculatus* (Pisces, Soleidae). *Copeia* 1974(3):660-670, 5 figs.
- S-399 Moring, J. R. 1972. A deformed *Anoplarchus purescens* (Stichaeidae) from northern California. *Copeia* 1972(1):187-188, fig.
- S-400 Morrow, J. E., Jr. 1951. A striped marlin (*Makaira mitsukurii*) without a spear. *Copeia* 1951(4):303-304, fig.
- S-401 Mugiya, Y. 1972. On aberrant sagittas of teleostean fishes. *Jap. J. Ichthyol.* 19(1):11-14.
- S-402 Muller, W. A. 1974. Fish anomalies [sic]. *The Long Island Fisherman* 33:12-13, 15.
- S-403 Nair, K. V. S. & A. Chellam. 1971. An abnormal sting-ray caught off Calicut. *Indian J. Fish.* 18(1-2):193-195.
- S-404 ——— & R. Soundararajan. 1973. On an instance of hermaphroditism in the electric ray, *Narcine timlei* (Bloch and Schneider). *Indian J. Fish.* 20(1):260-264.
- S-405 Necrasov, O. & E. Adascalitei. 1970. Sur quelques modifications morphologiques corrélatives à l'absence congénitale d'un oeil chez *Silurus glanis* L. *Rev. Roum. Biol. (Zool.)* 13:179-186, 10 figs.
- S-406 Nelson, J. S. 1971. Absence of the pelvic complex in nine-spine sticklebacks, *Pungitius pungitius*, collected in Ireland and Wood Buffalo National Park Region, Canada, with notes on meristic variation. *Copeia* 1971(4):707-717.
- S-407 Niazi, I. A. & S. K. Rathi. 1970. An ammocoete larva of *Entosphenus lamottenii* (Lesueur) with an accessory tail. *Curr. Sci.* 36(1967):463-464, 1 pl.
- S-408 Nichols, J. T. 1918. An abnormal winter flounder and others. *Copeia* 1918:37-39.
- S-409 Noble, A. 1971. Some deformities noticed in the Indian mackerel, *Rastrelliger kanagurta* (Cuvier). *Indian J. Fish.* 18(1-2):187-191.
- S-410 O'Connor, J. F. & B. W. Coad. 1975. Anomalies of the adipose and pelvic fins of a brook trout, *Salvelinus fontinalis*. *Trans. Amer. Fish. Soc.* 104(2):414.
- S-411 Okiyama, M. & T. Kawaguchi. 1974. A hermaphroditic specimen of mackerel *Scomber japonicus* from the Japan Sea. *Jap. J. Ichthyol.* 21(3):168, fig.
- S-412. ——— & W. Tomi. 1970. A reversed ambicolorate flathead flounder, *Hippoglossoides dubius* (Schmidt) from the Japan Sea. *Jap. J. Ichthyol.* 17:84-85, 2 pls.
- S-413 Ovais, M. 1974. On the presence of a forked barbel in a cat fish *Clarias batrachus* (Linnaeus). *Curr. Sci.* 43(4):125-126.
- S-414 Overstreet, R. M. & C. H. Lyles. 1974. A rubber band around an Atlantic croaker. *Gulf Res. Rep.* 4(4):476-478, fig.
- S-415 Pflugfelder, O. 1970. Ein fisch (*Abramis blicca* Bl.) mit zwei mundöffnungen. *Nachr. naturw. Mus. Aschaffenburg* 78(1969):79-82, 1 pl.
- S-416 Pleticha, P. 1971. Mikroskopische und anatomische untersuchungen an dicephalen doppelmissbildungen bei forellen (*Salmo irideus* Gibb.) *Zool. Anz.* 186:197-208, 6 figs.
- S-417 Pollard, D. A. 1972. The biology of a landlocked form of the normally catadromous salmoniform fish *Galaxias maculatus* (Jenyns). III. Structure of the gonads. *Aust. J. Freshwater Res.* 23(1):17-38.
- S-418 Powell, A. B. & F. J. Schwartz. 1972. Anomalies of the genus *Paralichthys* (Pisces, Bothidae), including an unusual doubletailed southern flounder, *Paralichthys lethostigma*. *J. Elisha Mitchell Sci. Soc.* 88(3):155-161.
- S-419 Quast, J. C. 1971. *Sebastes variegatus*, sp. n. from the northeastern Pacific Ocean (Pisces, Scorpaenidae). *Fish. Bull., U. S.* 69(2):387-398, 5 figs.
- S-420 Quereshi, T. A. & N. A. Quereshi. 1974. Extrapharyngeal thyroid follicles in a catfish *Heteropneustes fossilis*. *Curr. Sci.* 43(15):484.
- S-421 Quignard, J. P. & C. Capape. 1972. Cas d'hermaphrodisme chez *Raja miraletus* L. 1758. *Trav. Lab. biol. Halieutique, Univ. Rennes*, 6:133-140.
- S-422 Radulescu, I., T. Nalbant & N. Angelescu. 1972. Neofomatii osoase la *Gadus morhua* (L.) si *Cyprinus carpio* (L.). [Bony neofomatii in the fish species *Gadus morhua* (L.) and *Cyprinus carpio* (L.)]. *Bul. Inst. Cercet. Pisc.* 31(3-4):67-70.
- S-423 Raja, B. T. A. & V. N. Bande. 1972. An instance of abnormally ripe ovaries in the Indian mackerel, *Rastrelliger kanagurta* (Cuvier). *Indian J. Fish.* 19(1-2):176-179.
- S-424 Randolph, K. N. 1974. Superficial third eye of a channel catfish. *Proc. Okla. Acad. Sci.* 54:102-103, 2 figs.
- S-425 Reinsch, H. H. 1973. Ein abnormes otolithenpaar bei einem schellfisch [*Melanogrammus aeglefinus* (L.)]. *Ber. dtsh. Wiss. Komm. Meeresforschung* 22(4):461-462.
- S-426 Relyea, K. & B. Sutton. 1973. Cave dwelling yellow bullheads in Florida. *Florida Sci.* 36(1):31-34.
- S-427 Sadowsky, V. 1971. Notes on the bull shark *Carcharhinus leucas* in the lagoon region of Cananea, Brazil. *Bol. Inst. oceanogr., S. Paulo* 20(2):71-78.

- S-428 Sano, O. 1958. An aberrant sockeye salmon with pug head. *Bull. Hokkaido Reg. Fish. Res. Lab.* 19:35–36, fig. In Japanese.
- S-429 Scherer, M. D. 1973. Some skeletal anomalies in American shad (*Alosa sapidissima*) with an example of vertebral curvature in blueback herring (*A. aestivalis*). *Chesapeake Sci.* 14(4):298–300.
- S-430 Schwartz, F. J. 1973. Spinal and cranial deformities in the elasmobranchs *Carcharhinus leucas*, *Squalus acanthias*, and *Carcharhinus milberti*. *J. Elisha Mitchell Sci. Soc.* 89(1–2):74–77.
- S-431 Scott, D. B. C. 1975. A hermaphrodite specimen of *Coregonus lavaretus* (L.) (Salmoniformes, Salmonidae) from Loch Lomond, Scotland. *J. Fish. Biol.* 7:709, 2 pls.
- S-432 Seshappa, G. 1970. An interesting case of an adult sole (*Cynoglossus semifasciatus* Day) with a normal eye on the "blind" side of the head. *J. Mar. biol. Ass. India* 10:401–403, 2 pls.
- S-433 Sgano, T. & T. Abe. 1973. Xanthochroous examples of one or two species of sea chubs of the genus *Kyphosus* from the Bonin Islands. *UO* 16:1–2, fig.
- S-434 Sikstrom, C. B., D. A. Metner & W. L. Lockhart. 1975. Hermaphroditism in a white sucker (*Catostomus commersoni*) from the Athabasca River, Alberta. *Trans. Amer. Fish. Soc.* 104(2):413, fig.
- S-435 Singh, S. P. 1968. A note on the deformity in pomfret, *Stromateus cinereus* (Bloch). *J. Mar. biol. Ass. India* 10:175–177, 2 pls.
- S-436 Spieler, R. E. 1971. A carp-goldfish hybrid with no caudal fin. *Trans. Kans. Acad. Sci.* 74(3–4):342–343, fig.
- S-437 Spratt, J. D. 1975. Anomalous otoliths from the northern anchovy, *Engraulis mordax*. *Calif. Fish Game* 61(4):235–236, fig.
- S-438 Stephens, R. R. 1973. Twinning in *Porichthys notatus* Girard. *Trans. Amer. Fish. Soc.* 102(4):846, 2 figs.
- S-439 Subhedar, N. & P. D. Pasado Rao. 1974. An abnormal corpuscle of Stannius in the catfish, *Heteropneustes fossilis*. *Curr. Sci.* 43(17):550–551.
- S-440 Sundarsingh, M. 1975. Record of a species of *Mystus montanus* (Jerdon) with stunted pectoral spine. *Curr. Sci.* 44(11):388–389.
- S-441 Talent, L. G. 1973. Albinism in embryo gray smoothhound sharks, *Mustelus californicus*, from Elkhorn Slough, Monterey Bay, California. *Copeia* 1973(3):595–597, fig.
- S-442 ——— 1975. Pugheadedness in the longspine combfish, *Zaniolepis latipinnis*, from Monterey Bay, California. *Calif. Fish Game* 61(3):160–162, 2 figs.
- S-443 Tandon, K. K. 1963. Abnormal ovaries in *Glossogobius giuris* (Ham.). *Sci. & Cult.* 29:93–94.
- S-444 ——— & K. Sharma. 1971. A specimen of *Callichrous macrophthalmus* (Bluth) with a forked right barbel. *Curr. Sci.* 40:438, fig.
- S-445 Taylor, G., R. R. Stickney & R. Heard, III. 1973. Two anomalous flounders (Bothidae, *Etopus crossotus*) from Georgia estuarine waters. *Chesapeake Sci.* 14(2):147, fig.
- S-446 Tilak, R. & N. K. Sinha. 1971. A study of an abnormal specimen of *Mystus vittatus* (Bloch). *Zool. Polon.* 21(2):101–108.
- S-447 Topp, R. W. & D. S. Beaumariage. 1971. Two unusual striped mullet, *Mugil cephalus*, from the Florida west coast. *Trans. Amer. Fish. Soc.* 100(3):579–580.
- S-448 Tripathi, S. D. & R. K. Sharaf. 1973. Unilateral amelia in *Labeo rohita* (Ham.). *Sci. & Cult.* 39(12):560–561.
- S-449 Tyler, J. C. 1970. Abnormal fin and vertebral growth structures in plectognath fishes. *Proc. Acad. Nat. Sci. Phila.* 122(4):249–271, 15 figs.
- S-450 Valentine, D. W. & P. B. Samollow. 1973. A deformed kelp bass, *Paralabrax clathratus* (Girard), from Alijos Rocks, Baja California. *Calif. Fish Game* 59(2):148–151, 2 figs.
- S-451 Vazzoler, A. E. A., de M. 1971. Diversificação fisiológica e morfológica de *Micropogon furnieri* (Desmarest, 1822) ao sul de Cabo Frio, Brazil. *Bol. Inst. oceanogr., S. Paulo* 20(2):1–70, 39 figs. English summary.
- S-452 Venkataraman, G. 1970. The Indian mackerel. 4. Bionomics and life history. *Bull. Cent. mar. Fish. Res. Inst.* 24:17–40, 4 figs.
- S-453 Venkateswarlu, T. 1972. A note on an abnormal pectorial [sic] fin in *Puntius amphibia* (Val.). *Acta. Ichthyol. Piscatoria* 2(2):95–97.
- S-454 Walker, M. H. & C. G. Alexander. 1974. Encapsulated fish hooks from the stomachs of *Plectropomus maculatus* (Bloch) (Serranidae). *J. Fish. Biol.* 6:759–761.
- S-455 Wilkens, E. P. H. & R. M. Lewis. 1971. Occurrence of reversal and staining in North Carolina flounders. *Chesapeake Sci.* 12(2):115–116.
- S-456 Witkowski, A. 1973. Several interesting cases of deformation in the construction of fish fins and vertebral column. *Zool. Polon.* 23(3–4):245–251.
- S-457 Wunder, W. 1934. Beobachtungen über Knochen-erweichungen und nachfolgende Wirbelsäulen-Verkrümmung beim karpfen (*Cyprinus carpio* L.). *Z. Fisch.* 32:37–67.
- S-458 ——— 1949. Ein Fall von Wirbelsäulen-Verkürzung beim Hecht (*Esox lucius* L.). *Arch. Hydrobiol.* 42:470–473.
- S-459 ——— 1961. Einfluss der Wirbelsäulen-Verkrümmung in der Lendengegend auf die Gestalt der Schwimmblase des karpfens (*Cyprinus carpio* L.). *Z. Morph. Ökol. Tiere* 50:266–280.
- S-460 ——— 1966. Hochrückigkeit bei der Regenbogenforelle (*Salmo irideus* W. Gibb.) bedingt durch Wirbelsäulenverkürzung und gruppenweise Wirbelverschmelzung. *Z. morph. Ökol. Tiere* 57:249–258.

- S-461 Wunder, W. 1969. Wirbelanalyse mit Hilfe von Röntgenstrahlen bei einem Aal (*Anguilla anguilla* L.) mit Wellenkrümmung der Wirbelsäule (Plekospondylie). *Biol. Zbl.* 88:611–627.
- S-462 ——— 1971. Missbildungen beim Kaveljau (*Ga-*

lus morhua) verursacht durch Wirbelsäulenverkürzung. [Body deformities in cod (*Gadus morhua*) caused by spinal foreshortening.] *Helgoländ. wiss. Meeresunters* 22(2):201–212. English abstract. *Transl. Ser. Fish. Res. Bd. Canada*, 1972, 21 p.

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CORRIGENDA

The following corrections should be entered in the appropriate sections of the original bibliography and Supplement 2.

<u>Reference</u>	<u>Correction</u>
Title 195	Change: "Anat" to Anstalter.
Title 216	Change date to 1907.
Title 342	To read: Handa.
Title 478	To read: 2(12):205–210.
Title 493	To read: Kobayashi, His.
Title 495	To read: Kobayashi, Hir.
Title S-195	Delete.
Title S-278	Change date to 1964.