

7 References

- Abdulqader, G., Barsanti, L. and Tredici, M.R. (2000): Harvest of *Arthrospira platensis* from Lake Kossorum (Chad) and its household usage among the Kanembu. *J. Appl. Phycol.* 12: 493-498.
- Alonso-Andicoberry C., Garcia-Villada, L., Lopez-Rodas, V. and Costas, E. (2002): Catastrophic mortality in a Spanish national park caused by cyanobacteria. *Veterinary Record* 151: 706-707.
- Anagnostidis, K. and Golubić, S. (1966): Über die Ökologie einiger *Spirulina*-Arten. *Nova Hedwigia* 11: 309-335.
- Anagnostidis K. and Komárek J. (1985): Modern approach to the classification system of cyanophytes 1 – Introduction. *Arch. Hydrobiol. Suppl.* 71, *Algological Studies* 38/39: 291-302.
- Anagnostidis, K. and Komárek, J. (1988): Modern approach to the classification system of cyanophytes 3, Oscillatoriales. *Arch. Hydrobiol. Suppl.* 80, *Algological Studies* 50/53: 327-472.
- Bachmann; H. (1933): Phytoplankton von Victoria Nyanza-, Albert Nyanza- und Kiogasee. *Ber. Schweiz. Bot. Ges.* 42: 705-717.
- Bagchi, S.N., Palod, A. and Chauvan, V.S. (1990): Algicidal properties of a bloom forming bluegreen alga, *Oscillatoria* sp. *J. Basic Microbiol.* 30: 21-29.
- Baker, P.D. and Humpage, A.R. (1994): Toxicity associated with commonly occurring cyanobacteria in surface waters of the Murray-Darling basin, Australia. *Aust. J. Mar. Freshwater. Res.* 45: 773-786.
- Ballot, A., Pflugmacher, S., Wiegand, C., Kotut, K., Krause, E., Metcalf, J.S., Morrison, L.F., Codd, G.A. and Krienitz, L. (2002): Cyanobacterial toxins, a further contributory cause of mass deaths of flamingos at Kenyan Rift Valley lakes. Xth International Conference on Harmful Algae, St. Pete Beach, Florida, USA, October 21 to 25, 2002, p. 20.
- Bartholomew, G.A. and Pennycuick, C.J. (1973): The flamingo and pelican populations of the Rift Valley lakes in 1968-1969. *East Afr. Wildl. J.* 2: 189-198.
- Baurain, D., Renquin, L., Grubisic, S., Scheldeman, P., Belay, A. and Wilmotte, A. (2002): Remarkable conservation of internationally transcribed spacer sequences of *Arthrospira* ("*Spirulina*") (Cyanophyceae, Cyanobacteria) strains from four continents and of recent and 30-year-old dried samples from Africa. *J. Phycol.* 38: 384-393.
- Beadle, L.C. (1932): Scientific results of the Cambridge Expedition to the East African lakes, 1930-1.-4. The waters of some East African Lakes in relation to their fauna and flora. *J. linn. Soc. Zool.* 38: 157-211.
- Beadle, L.C. (1981): The inland waters of tropical Africa. An Introduction to Tropical Limnology. Second edition. Longman London, New York, 475 pp.
- Boyer, S.L., Flechtner, V.R. and Johansen, J.R. (2001): Is the 16S-23S rRNA internal transcribed spacer region a good tool for use in molecular systematics and population genetics? A case study in cyanobacteria. *Mol. Biol. Evol.* 18: 1057-1069.
- Brook, A.J., Kufferath, H., Ross, R. and Sims, P.A. (1957): A bibliography of African freshwater algae. *Rev. algol.*, N.S. 4: 207-233.
- Brown, L.H. (1959): Flamingos in Africa. *Ostrich Suppl.* 3: 79-83.
- Brown, L. (1973) The mystery of the flamingo. East African Publishing House, 129 pp.
- Bury, N.R., Eddy, F.B. and Codd G.A. (1995): The effects of the cyanobacterium *Microcystis aeruginosa*, the cyanobacterial hepatotoxin microcystin-LR and ammonia on growth rate and ionic regulation of brown trout. *J. Fish Biol.* 46: 1042-154.

- Campos, V., Cantarero, S., Urrutia, H., Heinze, R., Wirsing, B., Neumann, U. and Weckesser, J. (1999): Microcystin in cyanobacterial blooms in a Chilean lake. *Syst. Appl. Microbiol.* 22: 169-173.
- Carmichael, W.W. (1988): Naming of cyclic hepatotoxic toxins of cyanobacteria. *Toxicon* 26: 971-972.
- Carmichael, W.W. (1992a): Cyanobacteria secondary metabolites - the cyanotoxins. *J. Appl. Bacteriol.* 72: 445-459.
- Carmichael, W.W. (1992b): A Status Report on Planktonic Cyanobacteria (Blue-green Algae) and Their Toxins. Report no. EPA/600R-92/079. Washington, DC: Environmental Protection Agency, 141pp.
- Carmichael, W.W. (1994): Toxins of cyanobacteria. *Sci. Am.* 270: 64-70
- Carmichael, W.W. (1997): The cyanotoxins. *Adv. Bot. Res.* 27: 211-256.
- Carmichael, W.W., Biggs, D. and Peterson, M.A. (1979): Pharmacology of anatoxin-a, produced by the freshwater cyanophyte *Anabaena flos-aquae* NRC-44-1. *Toxicon* 17: 229-236.
- Carmichael, W.W. and Falconer I.R. (1993): Diseases related to freshwater blue-green algal toxin, and control measures. In Falconer, I.R. (ed.), *Algal Toxins in Seafood and Drinking Water*, pp. 187-209. Academic Press, London.
- Carmichael, W.W., Azevedo, S.M.F.O., An, J.S., Molica, R.J.R., Jochimsen, E.M., Lau, S. Rinehart, K.L., Shaw, G.R. and Eaglesham, G.K. (2001): Human fatalities from cyanobacteria: Chemical and biological evidence for cyanotoxins. *Environ. Health. Persp.* 109: 663-668.
- Castenholz, R.W. (1978): The biogeography of hot spring algae through enrichment cultures. *Mitt. Int. Ver. Limnol.* 21: 296-315.
- Castenholz, R.W. (1989): Subsection III, Order Oscillatoriales. In: Stanley, J.T., Bryant, M.P., Pfennig, N., and Holt, J.G. (eds.), *Bergey's Manual of Systematic Bacteriology*, Vol. 3, p.1771-1780, Baltimore, William and Wilkins.
- Castenholz, R.W., Jorgensen, B.B., D'Amelio, E., and Bauld, J. (1991): Photosynthetic and behavioral versatility of the cyanobacterium *Oscillatoria boryana* in a sulfide rich microbial mat. *FEMS Microbiol. Ecol.* 86: 43-58.
- Castenholz, R.W., Rippka R., Herdman M., and Wilmotte, A. (2001): Subsection III. (Formerly Oscillatoriales Elenkin 1934). In: Boone, D.R., Castenholz, R.W. (eds.) *Bergey's Manual of Systematic Bacteriology*, Second Edition, Volume 1. The Archaea and the Deeply Branching and Phototrophic Bacteria, pp. 539-562. Springer, New York.
- Chittick, E., Puschner, B., Walsh, M., Gearhart, S., St. Leger, J., Skocelas, E. and Branch, S. (2002): Blue-green algae microcystin toxicosis in captive Chilean flamingos. Proceeding of the American Association of Zoo Veterinarians. Milwaukee, USA. pp. 115-116.
- Chorus, I. (2001): Cyanotoxins, occurrence, causes consequences. Springer, Berlin, 357 pp.
- Christoffersen, K. (1996) Ecological implications of cyanobacterial toxins in aquatic food webs. *Phycologia* 35: 42-50.
- Ciferri, O. (1983): *Spirulina* the edible microorganism. *Microbiol. Rev.* 47: 551-578.
- Cocquyt, C., Vyverman, W. and Compère, P. (1993): A checklist of the algal flora of the East African Great Lakes. *Scripta Botanica Belgica* 8: 1-55.
- Codd, G.A. (1995): Cyanobacterial toxins: Occurrence, properties and biological significance. *Water Sci. Tech.* 32: 149-156.
- Codd, G.A. (2000): Cyanobacterial toxins, the perception of water quality, and the prioritisation of eutrophication control. *Ecological Engineering* 16: 51-60.

- Codd, G.A., Bell, S.G., Kaya, K., Ward, C.J., Beattie, K.A. and Metcalf, J.S. (1999): Cyanobacterial toxins, exposure routes and human health. *Eur. J. Phycol.* 34: 405-415.
- Compère, P. (1974): Algues de la région du lac Tchad II. Cyanophycées. Cah. O.R.S.T.O.M. Ser. Hydrobiol. 8: 165-198.
- Damnati, B. and Taieb, M. (1996): Hydrological evolution in the Holocene (7,400-0 years BP) of Lake Sonachi. *Compte Rendus de L'Academie des Sciences Serie II Fascicule A-Sciences de la Terre et des Planetes* 322: 141-148.
- DeMott, W.R., Zhang, Q.X. and Carmichael, W.W. (1991): Effect of toxic cyanobacteria and purified toxins on the survival and feeding of a copepod and three species of *Daphnia*. *Limnol. Oceanogr.* 36: 1346-1357.
- DeMott, W.R. and Moxter, F. (1991): Foraging on cyanobacteria by copepods: response to chemical defenses and resource abundance. *Ecology* 72: 1820-1834.
- Desikachary T.V. (1959): Cyanophyta. Indian Council of Agriculture Research. Monographs on Algae, New Delhi, India, 686 pp.
- Devereux, R., He, S.H., Doyle, C.L., Orkland, S., Stahl, D.A., LeGall, J. and Whitman, W.B. (1990): Diversity and origin of *Desulfovibrio* species: phylogenetic definition of a family. *J. Bacteriol.* 172: 3609-3619.
- Devlin, J.P., Edwards, O.E., Gorham, P.R., Hunter, M.R., Pike, R.K. and Stavric, B. (1977): Anatoxin-a, a toxic alkaloid from *Anabaena flos-aquae* NCR-44h. *Can. J. of Chem.* 55: 1367-1371.
- Domingos, P., Rubim, T.K., Molica, R.J.R., Azevedo, S.F.O. and Carmichael, W.W. (1999): First report of microcystin production by picoplankton cyanobacteria isolated strain from Northeast Brazilian drinking water supply. *Environ. Toxicol.* 14: 31-35.
- Dow, C.S. and Swoboda, U.K. (2000): Cyanotoxins. In: Whitton, B.A. and Pott, M. (eds.), *The Ecology of Cyanobacteria. Their Diversity in Time and Space*, pp. 37-59. Kluwer Academic Publishers, Dordrecht.
- Evans, J.H. (1997): Spatial and seasonal distribution of phytoplankton in an African Rift Valley lake (Lake Albert, Uganda Zaire). *Hydrobiologia* 354: 1-16.
- Falconer, I.R. (2001): Toxic cyanobacterial bloom problems in Australian waters: risks and impacts on human health. *Phycologia* 40: 228-233.
- Fox, G.E., Wisotzkey, K.D. and Jurtshuk, P. Jr. (1992): How close is close: 16S rRNA sequence identity may not be sufficient to guarantee species identity. *Int. J. Syst. Bact.* 42: 166-170.
- Garcia-Pichel, F., Mechling, M. and Castenholz, R.W. (1994): Diel migrations of microorganisms within a benthic hypersaline mat community. *Appl. Envir. Microbiol.* 60: 1500-1511.
- Geitler, L. (1932): Cyanophyceae. In: Rabenhorst's Kryptogamenflora von Deutschland, Österreich und der Schweiz (R. Kolkwitz) ed.). Akad. Verlagsgesellsch. Leipzig, 1196 pp.
- Gilroy, D.J., Kauffman, K.W., Hall, R.A., Huang, X. and Chu, F.S. (2000): Assessing potential health risks from microcystin toxins in blue-green algae dietary supplements. *Env. Health Persp.* 108: 435-439.
- Giovannoni, S.J., Turner, S., Olsen, G.J., Barns, S., Lane, D.J. and Pace, N.R. (1988): Evolutionary relationships among cyanobacteria and green chloroplasts. *J. Bacteriol.* 170: 3584-3592.
- Gophen, M., Ochumba, P.B. and Kaufman, L.S. (1995): Some aspects of perturbation in the structure and biodiversity of the ecosystem of Lake Victoria (East Africa). *Aquat. Living Resour.* 8: 27-41.

- Guglielmi, G., Rippka, R. and Tandeau de Marsac, N. (1993): Main properties that justify the different taxonomic position of *Spirulina* spp. and *Arthrospira* spp. among cyanobacteria. Bull. Inst. Oceanogr., Monaco, 12: 13-23.
- Guglielmi, G. and Cohen-Bazire, G. (1982): Structure and distribution of pores and perforation of the peptidoglycan wall layer in some cyanobacteria. Protistologica 18: 151-166.
- Hammer, U.T. (1986): Saline ecosystems of the world. Dr. W. Junk Publishers, Dordrecht. 616 p.
- Hecky, R.E. (1993): The eutrophication of Lake Victoria. Verh. Internat. Verein. Limnol. 25: 39-48.
- Hecky, R.E. and Kling, H.J. (1981): The phytoplankton and protozooplankton of the euphotic zone of Lake Tanganyika: species composition, biomass, chlorophyll content and spatio-temporal distribution. Limnol. Oceanogr. 26: 548-564.
- Hecky, R.E. and Kling, H.J. (1987): Phytoplankton ecology of the great lakes in the Rift Valley of Central Africa. Arch. Hydrobiol. Beih. 25: 197-228.
- Hecky, R.E. and Bugenyi, F.W.B. (1992): Hydrology and chemistry of the African Great Lakes and water quality issues: Problems and solutions. Mitt. Verein. Internat. Limnol. 23: 45-54.
- Henriksen, P., Carmichael, W.W., An, J. and Moestrup, Ø. (1997): Detection of an anatoxin-a(s)-like anticholinesterase in natural blooms and cultures of cyanobacteria/blue-green algae from Danish lakes and in the stomach contents of poisoned birds. Toxicon 35: 901-913.
- Hindák, F. (1985): Morphology of trichomes in *Spirulina fusiformis* Vorochnin from Lake Bogoria, Kenya. Arch. Hydrobiol. Suppl. 71, Algological Studies 38/39: 201-218.
- Hindák, F. (2001): Thermal microorganisms from a hot spring on the coast of Lake Bogoria, Kenya. Nova Hedwigia, Beih. 123: 77-93.
- Huber, C.S. (1972): The crystal structure and absolute configuration of 2,9-Diacetyl-9-azabicyclo[4.2.1]non-2-3-ene. Acta Cryst. 28: 2577.
- Hutchinson, G.E. (1967): A treatise on limnology. Vol. 2. A treatise on lake biology and limnoplankton. Wiley, New York, 1115 pp.
- Iltis, A. (1968): Tolérance de salinité de *Spirulina platensis* (Gom.) Geitl., (Cyanophyta) dans les mares natronées du Kanem (Tchad). Cah. O.R.S.T.O.M., Sér. Hydrobiol. 2: 119-125.
- Iltis, A. (1969): Phytoplankton des eaux natronées du Kanem (Tchad). I. Les lacs permanents à *Spirulina*. Cah. O.R.S.T.O.M., Sér. Hydrobiol. 3: 29-43.
- Iwasa, M., Yamamoto, M., Tanaka, Y., Kaito, M. and Adachi, Y. (2002): *Spirulina*-associated hepatotoxicity. The American Journal of Gastroenterology (AJG) 97: 3212-3213.
- Jassby, A. (1988): *Spirulina*: a model for microalgae as human food. In: Lemb, C.A., Waaland, J.R. (eds.), Algae and human affairs. pp. 149-179, Cambridge University Press, Cambridge.
- Jenkin, P. (1929): Biology of lakes in Kenya. Nature 124: 574.
- Jenkin, P.M. (1936): Reports on the Percy Sladen Expedition to some Rift Valley lakes in Kenya in 1929. 7. Summary of the ecological results with special reference to the alkaline lakes. Ann. Mag. Nat. Hist. Ser. 101: 133-181.
- Jensen, J.P., Jeppesen, E., Olrik, K. and Kristensen, P. (1994): Impact of nutrients and physical factors on the shift from cyanobacterial to chlorophyte dominance in shallow Danish lakes. Can. J. Fish. Aquat. Sci. 51: 1692-1699.
- Jochimsen, E.M., Carmichael, W.W., An, J.S., Cardo, D.M., Cookson, S.T., Holmes, C.E.M., Antunes, M.B.D., de Melo, D.A., Lyra, T.M., Barreto, V.S.T., Azevedo, S.M.F.O. and

- Jarvis, W.R. (1998): Liver failure and death after exposure to microcystins at a hemodialysis center in Brazil. *New Engl. J. Med.* 338: 873-878.
- Johnston, B.R. and Jacoby, J.M. (2003): Cyanobacterial toxicity and migration in a mesotrophic lake in western Washington, USA. *Hydrobiologia* 495: 79-91.
- Kairu, J.K. (1996): Heavy metal residues in birds of Lake Nakuru, Kenya. *Afr. J. Ecol.* 34: 397-400.
- Kebede, E. (1997): Response of *Spirulina platensis* (= *Arthrospira fusiformis*) from Lake Chitu, Ethiopia, to salinity stress from sodium salts. *J. Appl. Phycol.* 9: 551-558.
- Kebede, E., G.-Mariam, Z. and Ahlgren, I. (1994): The Ethiopian Rift Valley lakes: chemical characteristics of a salinity-alkalinity series. *Hydrobiologia* 288: 1-12.
- Kebede, E. and Willén, E. (1996): *Anabaenopsis abijatae*, a new cyanophyte from Lake Abijata, an alkaline, saline lake in the Ethiopian Rift Valley. *Arch. Hydrobiol. Suppl.* 112, *Algological Studies* 80: 1-8.
- Kebede, E. and Willén, E. (1998): Phytoplankton in salinity-alkalinity series of lakes in the Ethiopian Rift Valley. *Arch. Hydrobiol. Suppl.* 124, *Algological Studies* 89: 63-96.
- Kirpenko, N.I. (1986): Phytopathic properties of blue-green alga toxin. *Hydrobiology* J. 22: 44-47.
- Kling, H.J., Mugidde, R. and Hecky, R.E. (2001): Recent changes in the phytoplankton community of Lake Victoria in response to eutrophication. In: Munawar, M. and Hecky, R.E. (eds.): *The Great Lakes of the world (GLOW): Food-web, health and integrity.* pp. 47-65, Backhuys Publishers, Leiden.
- Kock, N.D., Kock, R.A., Wambua, J., Kamau, G.J. and Mohan, K. (1999): *Mycobacterium avium*-related epizootic in free ranging Lesser Flamingos in Kenya. *J. Wildlife Dis.* 35: 29-300.
- Komárek, J. and Anagnostidis, K. (1989): Modern approach to the classification system of Cyanophytes 4 – Nostocales. *Arch. Hydrobiol. Suppl.* 82, *Algological Studies*. 56: 247-345.
- Komárek, J. and Anagnostidis, K. (1999): Cyanoprokaryota 1. Teil: Chroococcales. In Süßwasserflora von Mitteleuropa (Ettl, H., Gärtner, G., Heynig, H. and Mollenhauer, D., eds.), 548 pp. Gustav Fischer, Jena.
- Komárek, J. and Kling, H. (1991): Variation in six planktonic cyanophyte genera in Lake Victoria (East Africa). *Arch. Hydrobiol. Suppl.* 88, *Algological Studies* 61: 21-45.
- Kotak, B.G., Lam, A.K.Y., Prepas, E.E., Kenefick, S.L., Hrudey, S.E. (1995): Variability of the hepatotoxin microcystin-LR in hypereutrophic drinking water. *J. Phycol.* 31: 248-263.
- Krienitz, L., Ballot, A., Kotut, K., Wiegand, C., Codd, G.A. and Pflugmacher, S. (2003): Rift-Valley-Seen Kenias - Naturwunder in Gefahr. *BIUZ* 33: 123-129.
- Kuiper-Goodman, T., Falconer, I. and Fitzgerald, J. (1999): Human health aspects. In: Chorus, I. and Bartram, J (eds.): *Toxic Cyanobacteria in Water. A Guide to their Public Health Consequences, Monitoring and Management.* pp. 113-153, E. and F.N. Spon, London.
- Lampert, W. (1981): Inhibitory and toxic effects of blue green algae on *Daphnia*. *Int. Revue ges. Hydrobiol.* 66: 285-298.
- Lanaras, T. and Cook, C.M. (1994): Toxin extraction from an *Anabaenopsis milleri* - dominated bloom. *Sci. Total Env.* 142: 163-169.
- Li, R., Denbella, H.J. and Carmichael, W.W. (2001): Isolates identifiable as *Arthrospira maxima* and *Arthrospira fusiformis* (Oscillatoriales, Cyanobacteria) appear identical on the basis of a morphological study in culture and 16S rRNA gene sequences. *Phycologia* 40: 367-371.

- Ludwig, W. and Klenk, H.-P. (2001): Overview: a phylogenetic backbone and taxonomic framework for prokaryotic systematics. In: Boone, D.R. and Castenholz (eds.) Bergey's Manual of Systematic Bacteriology. Second edition, pp. 49-65. Springer New York, Berlin.
- Lung'aya, H.B.O., M'harzi, A., Tackx, M., Gichuki, J. and Symoens, J.J. (2000): Phytoplankton community structure and environment in the Kenyan waters of Lake Victoria. Freshw. Biol. 43: 529-543.
- Lung'aya, H., Sitoki, L. and Kenyanya, M. (2001): The nutrient enrichment of Lake Victoria (Kenyan waters). Hydrobiologia 458: 75-82.
- Luukainen, R., Sivonen, K., Namikoshi, M., Fardig, M., Rinehart, K.L. and Niemelä, S.I. (1993): Isolation and identification of 8 microcystins from 13 *Oscillatoria agardhii* strains and structure of a new microcystin. Appl. Envir. Microbiol. 59: 2204-2209.
- Manen, J.-F. and Falquet, J. (2002): The cpcB-cpcA locus as a tool for the genetic characterization of the genus *Arthrosphaera* (Cyanobacteria): evidence for horizontal transfer. Int. J. System. Evol. Microbiol. 52: 861-867.
- Margheri, M.C., Piccardi, R., Ventura, S., Viti, C. and Giovannetti, L. (2003): Genotypic diversity of oscillatorian strains belonging to the genera *Geitlerinema* and *Spirulina* determined by 16S rDNA restriction analysis. Curr. Microbiol. 46: 359-364.
- Mari, C. and Collar, N. (2000): Pink Africa. Harvill, London, 207 pp.
- Matsunaga, H., Harada, K.I., Senma, M., Ito, Y., Yasuda, N., Ushida, S. and Kimura, Y. (1999): Possible cause of unnatural mass death of wild birds in a pond in Nishinomiya, Japan: Sudden appearance of toxic cyanobacteria. Natural Toxins. 7: 81-84
- McDermott, C.M., Feola, R. and Plude, J. (1995): Detection of cyanobacterial toxins (microcystins) in waters of northeastern Wisconsin by a new immunoassay technique. Toxicon 33: 1433-1422.
- Melack, J.M. (1979): Photosynthesis and growth of *Spirulina platensis* (Cyanophyta) in an equatorial lake (Lake Simbi, Kenya). Limnol. Oceanogr. 24: 753-760.
- Melack, J.M. (1982): Photosynthetic activity and respiration in an equatorial African soda lake. Freshw. Biol. 12: 381-400.
- Melack, J.M. (1988): Primary producer dynamics associated with evaporative concentration in a shallow, equatorial soda lake (Lake Elmenteita, Kenya). Hydrobiologia 158: 1-14.
- Melack, J.M. (1996): Recent developments in tropical limnology. Verh. Internat. Verein. Limnol. 26: 211-217.
- Mez, K., Beattie, K.A., Codd, G.A., Hanselmann, K., Hauser, B., Naegeli, H. and Preisig, H.R. (1997): Identification of a microcystin in benthic cyanobacteria linked to cattle deaths on alpine pastures in Switzerland. Eur. J. Phycol. 32: 111-117.
- Mohamed, Z.A. and Carmichael, W.W. (2000): Seasonal variation in microcystin levels of river Nile water at Sohag City, Egypt. Ann. Limnol.-Internat. J. Limnol. 36: 227-234.
- Moore, J.M. and Davidson, A. (1978): Rift structure in Southern Ethiopia. Tectonophysics 46: 159-173.
- Mwaura, F. and Moore, T.R. (1991): Forest and woodland depletion in the Lake Elementeita Basin, Kenya. Geoforum 22: 17-26.
- Neilan, B.A., Jacobs, D. and Goodman, A. (1995): Genetic diversity and phylogeny of toxic cyanobacteria determined by DNA polymorphisms within the phycocyanin locus. Appl. Envir. Microbiol. 6: 3875-3883.
- Nelissen, B., Wilmotte, A., Neefs, J.-M. and De Wachter, R. (1994): Phylogenetic relationships among filamentous helical cyanobacteria investigated on the basis of 16S ribosomal RNA gene sequence analysis. System. Appl. Microbiol. 17: 206-210.

- Nelson, Y.M., Thamby, R.J., Motelin, G.K., Raini, J.A., DiSante, C.J. and Lion, L.W. (1998): Model for trace metal exposure in filter-feeding flamingos at alkaline Rift Valley lakes, Kenya. Environm. Toxicol. Chem. 17: 2302-2309.
- Nizan, S., Dimentman, C. and Shilo, M. (1986): Acute toxic effects of the cyanobacterium *Microcystis aeruginosa* on *Daphnia magna*. Limnol. Oceanogr. 31: 497-502.
- Njuguna, S. (1988): Nutrient-phytoplankton relationships in a tropical meromictic soda lake. Hydrobiologia 158: 15-28.
- Ochumba, P.B.O. and Kibaara, D.I. (1989): Observations on blue green algal blooms in the open waters of Lake Victoria, Kenya. Afr. J. Ecol. 27: 23-34.
- Oduor, S.O. (2000): Diel physico-chemical dynamics, primary production and algae of Lake Baringo, Kenya. M. Sc. Thesis, International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE), Netherlands.
- OECD (Organization for Economic Cooperation and Development) (1982): Eutrophication of Waters. Monitoring, Assessment and Control. Final Report. OECD Cooperative Programme on Monitoring of Inland Waters (Eutrophication Control), Environment Directorate, OECD, Paris, 154 pp.
- Oh, H.M., Lee, S.J., Kim, J.H., Kim, H.S. and Yoon B.D. (2001): Seasonal variation and indirect monitoring of microcystin concentrations in Daechung Reservoir, Korea. Appl. Environ. Microbiol. 67: 1484-1489.
- Oliver, R.L. and Ganf, G.G. (2000): Freshwater blooms. In: Whitton, B.A. and Potts, M. (eds.), The Ecology of Cyanobacteria. Their Diversity in Time and Space. pp.149-194, Kluwer Academic Publishers Dordrecht.
- Onodera, H., Oshima, Y., Henriksen, P. and Yasumoto T. (1997): Confirmation of anatoxin-a(s), in the cyanobacterium *Anabaena lemmermannii*, as the cause of bird kills in Danish lakes. Toxicon 35: 1645-1648.
- Ostenfeld, C.-H. (1908): Phytoplankton aus dem Victoria Nyanza. In Engler, A. (ed.), Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 41: 330-350, Verlag Wilhelm Engelmann, Leipzig.
- Oudra, B., Loudiki, M., Sbiyyaa, B., Martins, R., Vasconcelos, V. and Namikoshi, M. (2001): Isolation, characterization and quantification of microcystins (heptapeptides hepatotoxins) in *Microcystis aeruginosa* dominated bloom of Lalla Takerkoust lake-reservoir (Morocco). Toxicon 39: 1375-1381.
- Oudra, B., Loudiki, M., Vasconcelos, V., Sabour, B., Sbiyyaa, B., Oufdou, K. and Mezrioui, N. (2002): Detection and quantification of microcystins from cyanobacteria strains isolated from reservoirs and ponds in Morocco. Environm. Toxicol. 17: 32-39.
- Owino, A.O., Oyugi, J.O., Nasirwa, O.O. and Bennun, L.A. (2001): Patterns of variation in waterbird numbers on four Rift Valley lakes in Kenya, 1991-1999. Hydrobiologia 458: 45-53.
- Oyugi, J.O. (1994): Lesser flamingos hit by mystery disease. Kenya Birds 2: 5-6.
- Paelrl, H.W. (1996): A comparison of cyanobacterial bloom dynamics in freshwater, estuarine and marine environments. Phycologia 35: 25-35.
- Park, H.-D., Watanabe, M. F., Harada, K.-I., Nagai, H., Suzuki, M. and Hayashi, H. (1993): Hepatotoxin (microcystin) and neurotoxin (anatoxin-a) contained in natural blooms and strains of cyanobacteria from Japanese freshwaters. Natural Toxins 1: 353-360.
- Park, H.-D., Kim, B., Kim, E., Okino, T. (1998): Hepatotoxic microcystins and neurotoxic anatoxin-a in cyanobacterial blooms from Korean lakes. Env. Tox. Wat. Qual. 13: 225-234.

- Patterson, G. and Wilson, K. K. (1995): The influence of the diel climatic cycle on the depth-time distribution of phytoplankton and photosynthesis in a shallow equatorial lake (Lake Baringo, Kenya). *Hydrobiologia* 304: 1-8.
- Pouria, S., deAndrade, A., Barbosa, J., Caavalcanti, R.L., Barreto, V.T.S., Ward, C.J. Prieser, W., Poon, G.K., Neild, G.H. and Codd, G.A. (1998): Fatal microcystin intoxication in haemodialysis unit in Caruaru, Brazil. *Lancet* 352: 21-26.
- Prinsep, M.R., Caplan, F.R., Moore, R.E., Patterson, G.M.L., Honkanen, R.E. and Boynton, A.L. (1992): Microcystin-LA from a blue-green alga belonging to the Stigonematales. *Phytochemistry* 31: 1247-1248.
- Reynolds, C.S. (1992): Eutrophication and the management of eutrophic algae: what Vollenweider couldn't tell us. In: Sutcliffe, D.W. and Jones, JG (eds.), *Eutrophication: Research and Application to Water Supply*, pp. 4-29. Freshwater Biological Association Ambleside, UK.
- Reynolds, C.S. and Walsby, A.E. (1975): Water-Blooms. *Biol. Rev.* 50: 437-481.
- Rich, F. (1931): Notes on *Arthrospira platensis*. *Rev. Algol.* 6: 75-82.
- Richmond, A. and Vonshak, A. (1978): *Spirulina* culture in Israel. *Arch. Hydrobiol. Beih. Ergeb. Limnol.* 11: 274-280.
- Ridley, M.W., Moss, B.L. and Percy, Lord R.C. (1955): The food of flamingos in Kenya Colony. *J. East Afr. Nat. Hist. Soc.* 22: 147-158.
- Rippka, R., Waterbury, J.B. and Stanier, R.Y. (1981): Provisional generic assignments for cyanobacteria in pure culture. In: Starr, M.P., Stolp, H., Truper, H.G., Balows, A. and Schlegel, H.G. (eds.), *The prokaryotes*, pp. 247-256. Springer Verlag, Berlin.
- Rippka, R., Castenholz, R.W. and Herdman, M. (2001): Subsection IV. (Formerly Nostocales (Castenholz 1989b sensu Rippka, Deruelles, Waterbury, Herdman and Stanier 1979). In: Boone, D.R. and Castenholz (eds.) *Bergey's Manual of Systematic Bacteriology*. Second edition, pp. 562-589. Springer, New York, Berlin.
- Robarts, R.D. and Zohary, T. (1987): Temperature effects on photosynthetic capacity, respiration, and growth rates of bloom-forming cyanobacteria. *N. Z. J. Mar. Freshw. Res.* 21: 391-399.
- Salazar, M., Martinez, E., Madrigal, E., Ruiz, L.E. and Chamorro, G.A. (1998): Subchronic toxicity study in mice fed *Spirulina maxima*. *J. Ethnopharmacol.* 62: 235-241.
- Scheffer, M., Rinaldi, S., Gragnani, A., Mur, L.R. and van Nes, E.H. (1997): On the dominance of filamentous cyanobacteria in shallow, turbid lakes. *Ecology* 78: 272-282.
- Scheldeman, P., Baurain, D., Bouhy, R., Scott, M., Mühling, M., Whitton, B.A., Belay, A. and Wilmette, A. (1999): *Arthrospira ("Spirulina")* strains from four continents are resolved into only two clusters, based on amplified ribosomal DNA restriction analysis of the internally transcribed spacer. *FEMS Microbiology Letters* 172: 213-222.
- Schlüter, T. (1993): Comparison of the mineral composition of the lakes of the East African Rift. Proceedings of the International Conference on Geoscientific Research in Northeast Africa/ Berlin/ Germany/ 17-19 June, pp. 657-662.
- Schlüter T. (1997): Geology of East Africa. *Beiträge zur Regionalen Geologie der Erde* Bd. 27: 1-484.
- Schmidle, W. (1902): Das Chlorophyceenplankton des Nyassa und einiger anderer innerafrikanischer Seen. *Ibidem* 33: 1-33.
- Schopf, J.W. (1994): Disparate rates, differing fates: tempo and mode of evolution changed from the Precambrium to the Phanerozoic. *Proc. Nat. Acad. Sci. USA* 91: 6735-6742.

- Schopf, J.W. (2000): The fossil record/cyanobacterial lineage. In: Whitton, B.A. and Potts, M. (eds.), *The Ecology of Cyanobacteria, Their Diversity in Time and Space.* pp.13-35, Kluwer Academic Publishers Dordrecht.
- Scott, W.E. (1991): Occurrence and significance of toxic cyanobacteria in Southern Africa. *Wat. Sci. Tech.* 23: 175-180.
- Sileo, L., Grootenhuis, J.G., Tuite, C.H. and Hopcraft, J.B.D. (1979): Mycobacteriosis in the Lesser Flamingos of Lake Nakuru, Kenya. *J. Wildl. Dis.* 15: 387-389.
- Sivonen, K. (1996): Cyanobacterial toxins and toxin production. *Phycologia* 35: 12-24.
- Sivonen, K., Namikoshi, W.R., Luukkainen, R., Färdig, M., Rouhiainen, L., Evans, W.R., Carmichel, W.W., Rinehart, K.L. and Niemelä, S.I. (1995): Variation of cyanobacterial hepatotoxins in Finland. In M. Munawar and M. Luotola (eds.), *The contaminants in the nordic ecosystem. Dynamics, processes & fate, Ecovision World Monograph Series,* pp. 163-169. SPB Academic Publishing, Amsterdam.
- Sivonen, K. and Jones, J. (1999): Cyanobacterial toxins. In: Chorus, I. and Bartram, J. (eds.), *Toxic Cyanobacteria in Water. A Guide to their Public Health. Consequences, Monitoring and Management.* pp. 41-112, E. and F.N. Spon, London.
- Skulberg, O.M., Carmichael, W.W., Andersen, R.A., Matsunaga, S., Moore, R.E. and Skulberg, R. (1992): Investigation of a neurotoxic Oscillatorialean strain (Cyanophyceae) and its toxin: isolation and characterization of homoanatoxin-a. *Environm. Toxicol. Chem.* 11: 321-329.
- Smith, V.H. (1982): The nitrogen and phosphorous dependance of algal biomass in lakes: an empirical and theoretical analysis. *Limnol. Oceanogr.* 27: 1101-1112.
- Smith, V.H. (1983): Low nitrogen to phosphorous ratios favour dominance by bluegreen algae in lake phytoplankton. *Science* 221: 669-671.
- Stackebrandt, E. and Goebel, B.M. (1994): Taxonomic note: a place for DNA-DNA reassociation and 16S rRNA sequence analysis in the present species definition in bacteriology. *Int. J. Syst. Bacteriol.* 44: 846-849.
- Steffensen, D., Burch, M., Nicholson, B., Drikas, M. and Baker, P. (1999): Management of toxic blue-green algae (cyanobacteria) in Australia. *Environm. Toxicol.* 14: 183-195.
- Talling, J.F. (1966): The annual cycle of stratification and phytoplankton growth in Lake Victoria (East Africa). *Int. Revue ges. Hydrobiol.* 51: 545-621.
- Talling, J.F. (1987): The phytoplankton of Lake Victoria (East Africa). *Arch. Hydrobiol. Beih. Ergeb. Limnol.* 25: 229-256.
- Talling, J.F. and Talling, I.B. (1965): The chemical composition of African lake waters. *Int. Revue ges. Hydrobiol.* 50: 421-463.
- Tencalla, F.G., Dietrich, D.R. and Schlatter, C. (1994): Toxicity of *Microcystis aeruginosa* peptide toxin to yearling rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 30: 215-224.
- Tomaselli, L. (1997): Morphology, ultrastructure and taxonomy of *Arthospira (Spirulina) maxima* and *Arthospira (Spirulina) platensis*. In Vonshak, A. (ed.), *Spirulina platensis (Arthospira). Physiology, cell-biology and biotechnology.* pp. 1-15, Taylor and Francis, London.
- Tuite, C.H. (1981): Standing crop densities and distribution of *Spirulina* and benthic diatoms in East African alkaline saline lakes. *Freshw. Biol.* 11: 345-360.
- Vareschi, E. (1978): The ecology of Lake Nakuru (Kenya). I. Abundance and feeding of the Lesser Flamingo. *Oecologia* 32: 11-35.
- Vareschi, E. (1982): The ecology of Lake Nakuru (Kenya). III. Abiotic factors and primary production. *Oecologia* 55: 81-101.

- Verschuren, D. (1999): Influence of depth and mixing regime on sedimentation in a small, fluctuating tropical soda lake. Limnol. Oceanogr. 44: 1103-1113.
- Vick, K. (2000): Kenya's pink death. Washington Post March 7, <http://www.epa.gov/earlink1/earthlink/00janfeb.htm#kenya>
- Vonshak, A. (1987): Strain selection of *Spirulina* suitable for mass production. Hydrobiologia 151/152: 75-77.
- Vonshak, A. (1997): *Spirulina*: growth, physiology and biochemistry. In: Vonshak, A. (ed.) *Spirulina platensis (Arthrospira)*. Physiology, cell-biology and biotechnology. pp.43-65, Taylor & Francis, London.
- Vonshak, A., and Tomaselli, L. (2000): *Arthrospira*. In: Whitton, B.A. and Potts, M. (eds.), The Ecology of Cyanobacteria. Their Diversity in Time and Space, pp. 505-522. Kluwer Academic Publishers Dordrecht.
- Walsby, A.E. (1994): Gas vesicles. Microbiol. Rev. 58: 94-144.
- Wanjiru, J. (2001): Kenya's pink flamingos weighted down by heavy metals. Environment News Service, July 16, 2001. [wysiwyg://4/http://www.ens-news.com/ens/jul2001/2001L-07-16-04.html](http://www.ens-news.com/ens/jul2001/2001L-07-16-04.html).
- Ward, D.M. and Castenholz, R.W. (2000): Cyanobacteria in geothermal habitats. In: Whitton, B.A. and Pott, M. (eds.), The Ecology of Cyanobacteria. Their Diversity in Time and Space pp. 37-59. Kluwer Academic Publishers, Dordrecht.
- Whitton, B.A. and Potts, M. (2000): Introduction to the cyanobacteria. In: Whitton, B.A. and Potts, M. (eds.), The ecology of cyanobacteria. Their Diversity in Time and Space, pp. 1-11. Kluwer Academic Publishers, Dordrecht.
- WHO (1998): Guidelines for drinking water quality, 2nd edition, Addendum to Volume 2, Health criteria and other supporting information. World Health Organization, Geneva.
- Wicks, R.J. and Thiel, P.G. (1990): Environmental factors affecting the production of peptide toxins in floating scum of the cyanobacterium *Microcystis aeruginosa* in a hypertrophic African reservoir. Environ. Sci. Technol. 24: 1413-1418.
- Willén, T. and Mattson, R. (1997): Water-blooming and toxin producing cyanobacteria in Swedish fresh and brackish waters, 1981-1995. Hydrobiologia 353: 181-192.
- Wilmette, A. (1994): Molecular evolution and taxonomy of cyanobacteria. In: Bryant, D.A. (ed.), The Molecular Biology of Cyanobacteria, pp.1-25. Kluwer, Dordrecht.
- Wilmette, A. and Herdman, M. (2001): Phylogenetic relationships among the cyanobacteria based on 16S rRNA sequences. In: Boone, D.R. and Castenholz R.W. (eds.) Bergey's Manual of Systematic Bacteriology. Second edition, pp. 487-493. Springer, New York.
- Woese, C.R., Sogin, M., Stahl, D., Lewis, B.J. and Bonen, L. (1976): A comparison of the 16S ribosomal RNAs from mesophilic and thermophilic bacilli: some modifications in the Sanger method for RNA sequencing. J. Mol. Evol. 7: 197-213.
- Woese, C.R. (1987): Bacterial evolution. Microbial Rev. 51: 221-271.
- WoldeGabriel G. (2002): The main Ethiopian Rift system: an overview on volcanic, tectonic, rifting, and sedimentation processes. In: Ethiopian Rift Valley Lakes, Tuodorancea, C. and Taylor, W.D. (eds.), pp. 13-39. Backhuys Publishers, Leiden.
- Wołoszynska, J. (1914): Studien über das Phytoplankton des Victoriasees. Hedwigia 55: 184-223.
- Wood, R.B and Talling, J.F. (1988): Chemical and algal relationships in a salinity series of Ethiopian inland waters. Hydrobiologia 158: 29-67.
- Yoo, R.S., Carmichael, W.W., Hoehn, R.C. and Hrudey, S.C. (1995): Cyanobacterial (Blue-Green Algal) Toxins: A Resource Guide. American Water Works Association Research Foundation, Denver, Co, 229 pp.