# BIODATA OF PROFESSOR ANOOP K. DOBRIYAL



1. Name: Dr. Anoop Kumar Dobriyal

**2. Date of Birth:** 31<sup>st</sup> May, 1959

## 3. Present Position:

(i) Professor and In-charge Head
Department of Zoology and Biotechnology
H.N.B.Garhwal University (A Central University) Campus,
Pauri Garhwal-246001, Uttarakhand, India
(Professor since 2001)

(ii) Regional Director (Pauri Garhwal)-Additional ChargeUttarakhand Open University,Haldwani (2012 onwards)

## 4. Worked as:

(i) Professor, HOD and Convener BOS

Department of Zoology and Biotechnology H.N.B.Garhwal University (A Central University) Srinagar Garhwal-246174, Uttarakhand, India

- (ii) Director, HNB Garhwal University BGR Campus Pauri Garhwal (2015 -2018)
- 4. Present Basic pay (After 7<sup>th</sup> Pay Commisiion):

Rs. 2,18,200/-

5. Address for correspondence:

#### **Prof. Anoop Dobriyal**

Chandola Bhavan, Thana Mohalla, Pauri Garhwal - 246001.

(Mobile-9412960687; Phone®: 1368222925)

e-mail anoopkdobriyal@rediffmail.com

# 6 Academic Qualification:

- (i) M.Sc. (Zoology- Specialization in Ichthyology) -1979
   (Gold Medalist), HNB.Garhwal University, Srinagar Garhwal
- (ii) **Doctor of Philosophy** (Fish Biology and Aquatic Biodiversity)- 1985
- 7. Teaching Experience: 35 Years
- 8. Research Experience: 38 Years.
- 9 Student awarded D. Phil. Degree under supervision and their Present position: 23 (+ 2 working)
- (i) **Dr. Anil Kumar Bahuguna (1991**): Studies on the Gondal cycle and spawning ecology of *Barilius barna* (Ham.). **Principal**,Secondary School
- (ii) **Dr. Neeraj Kumar (1992)**: Ecological studies on the macrozoobenthic communities of some hillstreams of Alaknanda river system. **Associate Professor (Meerut College)**
- (iii) **Dr. Chandra Bhanu Kotnala (1992)**: Ecological studies on the primary productivity of river Nayar. **Assistant Professor (HNBGU)**
- (iv)Dr. Kuldeep Singh Negi (1999): Some aspects of fish biology of *Crossocheilus latius* latius (Ham.) correlated with its riverine environment. Associate Professor (Govt. College)
- (v) **Dr. Kum Kum Rautela (1999)**: Ecological studies on the spawning biology of some coldwater fishes of Khoh stream. **Principal Govt.PG College Lansdown**
- (vi) Vinteshwar Prasad Balodi (2001): Ecological studies on the macrozoobenthic communities of the Nayar river system.

  Assistant Professor (HNBGU)
- (vii) **Ms. Anju Thapliyal (2003):** Some aspects of fish biology of the hillstream catfish *Pseudecheneis sulcatus* (Mc Clelland) from Garhwal Himalaya, Uttaranchal.

#### **Assistant Professor (Govt PG College, Kotdwar)**

(viii) **S.P.Uniyal (2004).** Fish biological investigations on *Tor chilinoides* (McClelland) correlated with its habitat ecology.in the Western Nayar.

#### Assistant Professor (Govt. PG College Gopeshwar)

- (ix) Ravindra Singh (2005): Some aspects of fish biology and paraersitology of *Noeemacheilus botia* (Ham.) from Khoh river.

  Assistant Professor (HNBGU)
- (x) **Pramila Bahuguna (2006):** Cyclic histological and histochemical changes in the gonads of mahseer, *Tor putitora* (Ham.) correlated with its migratory behaviour from Doon valley.

#### **Principal GGIC**)

(xi) **Kishor Kumar (2006):** Some aspects of fish biology and habitat ecology of a hillstream fish *Botia dayi* Hora from Garhwal Himalaya, Uttaranchal. **Lab Technician (PG College)** 

- (xii) Manish Kukrety (2006): Biology of Chukar partidge from Garhwal Himalaya, Uttaranchal. Assistant Professor (Govt. PG College Gopeshwar)
- (xiii) Pankaj Bahuguna (2008) Fish biology of *Puntius conchonius* (Ham.-Buch) from Garhwal Himalaya.

  Assistant Professor (Govt. PG College Agastmuni)
- (xiv) Sandhya Goswami (2009) Ecology and biodiversity of Mandal from Garhwal Himalaya. Scientist
- (xv) Vikas Sharma (2011)- In Vitro Rapid mass multiplication and molecular validation of Swertia chirayita.

  Assistant Prof. ARNI University, Kathgarh, Indora (HP)176401)
- (xvi) Nidhi Srivastava (2011)- In Vitro Rapid mass multiplication and molecular validation of Aconitum heterophyllum.

  Assistant Professor, SBS PGI Balawala D.dun)
- (xvii) Maryada Goyal (2011)- Studies on Isolation, Purification, Kinetic Characterisation, and Immobilisation of α-amylase from some legumes of Garhwal Himalayan Region

## Assistant Professor in Private College (Haryana)

- (xviii) Deepesh Bhatt (2012). Molecular cloning and In Silico Characterization of apx gene from Elucine coracana.

  Assistant Professor S R K I SURAT, Gujrat
- (xix) Ram Krishan (2012). Fish biology of *Amblyceps mangois* (Hamilton- Buchanan) from Garhwal Himalaya, Uttarakhand.

  Asistant Professor Govt College, Srinagar J & K.)
- (xx) Rattan Deep Singh (2012). Evaluation of In Vitro digestibility, haemagglutinating activity and characteristics of α amylase inhibitor- A study of selected *Phaseolus vulgaris* cultivars of Uttarakhand. (Assistant professor, BFIT, D Dun)
- (xxi). **Shashi Yadav (2016)**. "Isolation and genetic characterization of *Aeromonas* spp. from aquatic environment".

  Bank employee
- (xxii) Mohd. Rashid. (2019). Fish Biology of Mastacembelus armatus (Lacepede) from river Nayar, Garhwal Himalaya, Uttarakhand (Submitted) (Lecturer in Biology, J&K)
   (xxiii) Mohd Sagir (2019) Impact of vegetation on Periphyton communities of river Nayar.
   (Thesis submitted) (UGC-CSIR SRF)
- (xxiv). Shailja Negi (Registered since 2017). Diversity and drifting patterns of water mites from spring-fed streams of Garhwal Himalaya. (JRF in Project)
- (xxv). Deeksha Mamgain (Registered in 2019). Ecological study of benthic communities and their contribution to fishery in the spring-fed stream Basti damaar, a tributary of river Mandakini from Rudraprayag Garhwal, Uttarakhand. (SGRR University Dehradun)

### 10. Invention

**Dobriyal Index** for determination of sexual maturity in Fishes: *Dobriyal, A.K., Rautela, K.K., and Rautela, A.S. Uttar Pradesh Journal of Zoology,* 19:207-209. (AVAILABLE ON INTERNET- DICTIONARY OF ICHTHYOLOGY) – Researchers are using this index round the world.

## 11 Publications:

(A)	Research	Paper	published:
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180

(B) **Books (Edited; Co-author):** 

- 04
- (i) Biological Diversity in Freshwater Environment (2005, Co-Editor): Transmedia, Media House, Srinagar Garhwal. P. 332
- (ii) Uttaranchal main Matsyiki ki bhavi sambhavnayen: Proceedings of National Seminar in Hindi (2005, Co-Editor): CIFE, Mumbai. P. 222
- (iii) Advances in Animal Sciences (M. Phil. Course Book for Chaudhary Devi Lal University, Hariyana)- 2007-(Kumar and Dobriyal)
- (iv) Biology of ornamental fish *Puntius conchonius* (Ham. Buch.). (Pankaj Bahuguna and A K Dobriyal, 2018, NPH Delhi) pp 226 (ISBN: 978-93-87590-46-5). In Press

# 12 Awards/Honors/Fellowships

- (i) (FAEB)-Fellow of Academy of environmental Biology- 1981-82
- (ii) Young Scientist Award- Asian Fishery Society, Indian Branch 1987
- (iii) (FZSI)-Fellow of zoological Society of India- 1989
- (iv) Group Study Exchange (Cultural Exchange) Award-Pennsylvania and Maryland, USA- Rotary Foundation. 1993
- (v) (FSB)-Fellow of Society of Biosciences 1995
- (vi) Scientist of the year Award- 2002 by NATIONAL ENVIRONMENTAL SCIENCE ACADEMY, NEW DELHI.
- (vii) (FIFSI)- Fellow of Inland Fisheries Society of India- 2004
- (viii) (FIAES)- Fellow of Indian Academy of Environmental Sciences- 2005
- (ix) ASEA Fisheries Award- 2006
- (x) (FASEA)- Fellow of Action for Sustainable, Efficacious Development and Awareness, India.2006
- (xi) RASHTRIYA SHIKSHA SAMMAN AWARD- 2009 by Council for Economic Growth and Research, New Delhi
- (xii) PAUL HARRIS FELLOW OF ROTARY FOUNDATION (2010)
- (xiii) FANSF (Fellow of Applied and Natural Science Foundation)- 2011
- (xiv) Silver Jubilee Gold Medal of Indian Academy of Environmental Sciences, Hardwar (2012)
- (xv) FNSC (Fellow of Natural Science and Culture (2012)

- (xvi) Certificate awarded from Pulse polio India Office, Delhi.(Twice).
- (xvii) 7<sup>th</sup> Academic Brilliance award for Excellence in Research by EET CRS Education expo TV NOIDA, (2019)

# 13. Membership/ affiliation to the professional Societies.

- 1. Life member of Zoological Society of India.
- 2. Life member of Society of Bio-sciences.
- 3. Life member of National Environmental Science Academy, New Delhi
- 4. Life member of Inland Fisheries Society of India.
- 5. Life member of Society of Nature conservator
- 6. Life member of Indian Academy of Environmental Science, Hardwar
- 7. Life member of Action for Sustainable, Efficacious Development and Awareness, Hardwar, India.
- 8. Life Member of Aquatic Biodiversity Conservation Society, NBFGR, Lucknow
- 9. Full member of Asian Fishery Society, (Phillippines).
- 10. Member of Asian Fishery Society, Indian Branch (Mangalore).
- 11. Member of Bombay Natural History society
- 12. Member of Council for Economic Growth and Research, New Delhi
- 12. Member of Editorial Board of various journals from time to time.
- 13. Member Red cross Society of India, Pauri District
- 14. Member of Uttar Pradesh Zoological Society (Muzaffarnagar).
- General Secretary of Society for Himalayan Action Research and Development (SHARAD) since 2005
- 16. Life member of International Council for Man and Nature (MANU)
- 17. Life Member of Applied and Natural Science Foundation.
- 18 Founder Member of Foundation of Natural Science and Culture

# 14. Attended Seminars/ Symposia/ Workshops/ Conferences/Training courses/Cultural exchange programme /Delivered special lectures: 70

(In most of the seminars invited lectures were delivered and session was chaired).

#### 15 ADMINISTRATIVE/ACADEMIC AND OTHER EXPERIENCES.

- 1. Regional Director (Pauri Garhwal), Uttarakhand Open University, Haldwani (Working) Since January, 2012
- 2. HOD Zoology and Biotechnology and Convener of BOS of HNB Garhwal Central University (15.1 2015-14.1.2018)
- Incharge Head of the Zoology Department of University campus responsible for administrative, academic and financial management of the department since 28.7.1986 (33 Years)
- 4 Deputy Dean, Students' Welfare (HNB Garhwal Central University)- 2011-2013
- 5. Assistant Dean Student's Welfare during 1999-2001, 2009-2011
- 6. Assistant Election Officer for student's union election during 1998-2001
- 7. Chief Election Officer (Students' Union- 2006-07 and 2008-09)
- 8. Assistant Proctor of the campus. 1987- 1989, 2002-03
- 9. Sports secretary of the campus responsible for all sports activities July 1989-July, 1990.
- 10. Cultural secretary responsible for student's cultural activities, july, 1987-July 1990.
- 11. Chairman, Academic forum of science faculty.1987-1990.
- 12. Member Faculty Board. (Science) Dec.1993-1996., 2001 onwards
- 13. Member University Court.since 1986, i.e., 22 years
- 14. Member of building and boundary wall construction committee. 1996-1997.
- 15. Member of Admission rules framing committee.1997-98.
- 16. Editor of campus bulletin "Himbharati" since 1988 to 2009
- 17. Editor University News Letter since 2003
- 18. Member of NAAC committee of HNB Garhwal University (Internal).
- 19. Member of BOS of HNB Garhwal University
- 20. Member of BOS and RDC of Allahabad University (2002-04)
- 21. Member of BOS and RDC of Kumaun University (2008-11, 2019 onwards)
- 22. Member of BOS and RDC of CSJM Kanpur University (2010-13)
- 23. Member of BOS of LMS Autonomous Govt PG College, Rishikesh (2010-11, 2016-19)
- 24. Member of BOS of SGRR University Dehradun (2016-18)
- 25. Member of BOS of SBS University Balawala (2018 onwards)
- 26. Member of BOS of Himalayan University Jolly Grant (2019 onwards)

- 27. General Secretary of Society for Himalayan Action research and Development (SHARAD)- HNB Garhwal university Campus, Pauri Garhwal since 2005
- 28. Managing Editor of Himalayan Journal of Social Sciences and Humanities since 2006.
- 29. Professor In-charge Library of University Campus, Pauri (July, 2007- Dec., 2008)
- 30. Subject expert of Union Public Service Commission, New Delhi and P S C Uttarakhand.
- 31. Teacher Counselor of Career Counseling and placement cell Pauri Campus (2006- Till Date)
- 32. Managing Editor of Journal of Mountain Research since 2006.
- 33. Editor and referee of various journals from time to time (International Journal of Biology, Canada 2010-11, International Journal for Environment and Waste Management- 2009-11 (Inderscience submission system); Essence, an International Journal for Environmental Conservation and Rehabilitation, Hardwar 2010 onwards, Journal of Applied and Natural Sciences, Hardwar, 2010 onwards, Journal of Environment and Biosciences, Hardwar; Agricultural and Biological Research, Lucknow; Journal of Current Sciences, Dumka, ; Indian Journal Environment and ecoplanning, Dumka; Himalayan Chemical and Pharmaceutical Bulletin, Garhwal, Punjab University Research Journal (Science), Chandigarh; Journal of Mountain Research and Himalayan Journal of Social Sciences and Humanities, Pauri Garhwal.
- 34. In-charge Principal and In-charge Director of Campus from time to time.
- 35. Assistant Supdt and Senior Supdt of Exam from time to time.
- Convener, Anti Ragging Committee, HNB GU Campus, Pauri Garhwal-2011-12, 12-13
- 37. Coordinator Uttarakhand Open University, Study Center, HNBGU Campus Pauri Garhwal- 25.5.2011- 14.2.2012
- 38. Member of Inspired Teachers' Network, HNB Garhwal University. (January, 2014 onwards)
- 39. Expert Member of BOS of Uttarakhand Open University (July,2019 onwards)

# List of Publications of Prof. A.K.Dobriyal

- 1. Singh, H.R. and Dobriyal, A.K. 1981. Potamology of the stream Chakagadera in relation to the productivity of coldwater minor carps in Garhwal Himalaya. *Proc. Indian natn. Sci. acad.* B 47: 652-655.
- 2. Singh, H.R., Nauriyal, B. P. Kumar, A. and Dobriyal, A.K. 1981. Morphometric abnormalities. And their relationmships in two hillstream fishes, *Puntius chilinoides* (Mc Clelland) and *Schizothorax plagiostomus* (Heckel) from Garhwal Himalaya. *International J. Acad. Ichthyol.* 2: 61-63.
- 3. Dobriyal, A.K. and Singh, H.R. 1981. Diurnal variation in some aspects of limnology of the river Mandakini from the Garhwal Himalaya. *Uttar Pradesh J. Zool.* 1: 16-18.
- 4. Badola, S.P., Singh, H.R. and Dobriyal, A.K. 1982. Note on sexual dimorphism in *Barilius bendelisis* (Ham.) *Indian J. Anim. Sci.* 52: 1284-1286.
- 5. Singh, H.R. and Dobriyal, A.K. 1982. First Report on the occurrence of *Botia geto* (Ham.) in the river Alaknanda of Garhwal Himalaya. *Proc. Nat. Acad. Sci.* 52.. 137-139.
- 6. Singh, H.R., Dobriyal, A.K., Bhatt, J.P., Bahuguna, S.N. and Singh, W. 1982. An abnormal specimen of *Crossocheilus latius* (Ham.) from the Garhwal Himalaya. *Proc. Nat. Acad. Sci. India.* 52 B: pp. 326.
- 7. Singh, H. R., Nauriyal, B.P. and Dobriyal, A.K. 1982. Fecundity of a hillstream minor carp *Puntius chilinoides* (McClelland) from Garhwal Himalaya. *Proc. Indian Acad. Sci. (Anim. Sci.)* 91: 487-491.
- 8. Singh, H.R., Dobriyal, A.K., Nautiyal, P. and Pokhriyal, R.C. 1982. Diurnal cycle of abiotic parameters of the river Nayar during rainy season. *Uttar Pradesh J. Zool.* 2: 54-55.
- 9. Singh, H.R., Badola, S.P. and Dobriyal, A.K. 1982. Ecology of the river Nayar of Garhwal Himalaya. *Uttar Pradesh J. Zool.* 2: 72-76.
- 10. Singh, H.R. and Dobriyal, A.K. 1983. Morphometric characters and their relationships in the catfish, *Pseudecheneis sulcatus* (Mc.Clelland). *Indian J. Anim. Sci.* 53: 541-546.
- 11. Dobriyal, A.K. and Singh, H.R. 1983. A case study on the gonadal tumour in *Crossocheilus latius latius* (Ham.) from the Garhwal Himalaya. *Proc. Nat. Acad. Sci. India.* 53 B: 107-108
- 12. Dobriyal, A.K., Singh, H.R. and Bisht, K.L. 1983. Diurnal variation in hydrobiological parameters of two hillstreams of Garhwal Himalaya, India. *Uttar Pradesh J. Zool.* 3:30-34.
- 13. Pokhriyal, R.C., Dobriyal, A.K. and Singh, H.R. 1983. Seasonal variation in physicochemical parameters of the stream Khandagad. *Uttar Pradesh J. Zool.* 3: 70-72
- 14. Singh, H.R., Dobriyal, A. K.and Nauriyal, B. P. 1985. Spawning patterns and environmental regulation of spawning in hillstream fishes. In: The *Endocrine System and the Environment* (Ed.) Follett, B.K.et.al. *Japan Sci. Soc. Press. Tokyo Springer- Verlag, Berlin.* Pp.1-11.
- 15. Dobriyal, A.K. 1985. Ecology of limnofauna in small streams and their importance to the village life in Garhwal Himalaya. *Uttar Pradesh J. Zool.* 5: 139-144.
- 16. Singh, H.R., Dobriyal, A.K. and Pokhriyal, R.C. 1985. Toxicity of Diammonium Phosphate (DAP) to the hillstream minor carp *Barilius bendelisis* (Ham.). *Uttar Pradesh J. Zool.* 5: 89-93.

- 17. Dobriyal, A.K. 1986. Breeding of Indian Major carps by hormone stimulation. *Proc. Nat. Symp. on Fish & their Environ.* Pp. 135 138.
- 18. Nautiyal, P., Dobriyal, A.K., Chaukiyal, D.C. and and Singh, H.R.Quality and potability of Alaknanda water at Srinagar Garhwal with a note on bacterial density as an indicator of pollution. *Pollution Research* 5:143-145.
- 19. Dobriyal, A.K. and Singh, H.R. 1987. The reproductive biology of a hillstream minor carp *Barilius bendelisis* (Ham.) from Garhwal Himalaya, India. *Vest. Cs. Spolec. Zool.* 51:1 10.
- 20. Singh, H. R., Badola, S.P. and Dobriyal, A.K. (1987). Geographical distributional list of ichthyofauna of Garhwal Himalaya with some new records. *J. Bombay Nat. Hist Soc.* 84: 126-132.
- 21. Dobriyal, A.K. and Singh, H.R. 1987. A case study on the origin of rhithroplankton in the Garhwal hillstreams. *Agri. Biol. Res.* 3: 104-106.
- 22. Dobriyal, A.K. and Bahuguna A.K. 1987. Morphometric characters and their relationships in the hillstream loach *Noemacheilus montanus*. *Himalayan J. Env. Zool*. 1: 23-27.
- 23. Singh, H.R. and Dobriyal A.K. 1987. First report on the occurrence of *Botia almorhae* Gray in the river Alaknanda of Garhwal Himalaya. *Proc. Nat. Acad. Sci. India.* 57: 537- 539.
- 24. Bhatt, J.P., Dobriyal, A.K. and Farswan, Y.S. 1987. Growth response in the fry of *Schizothorax richardsonii* (Gray) to the plant toxins. *J. Environ. Biol.* 8 (2): 207-215.
- 25. Chandola, K. Dobriyal, A.K. and Bahuguna, A. 1987. Fish and economy of Garhwal. *Himalaya, Man and Nature* 11: 8-10.
- 26. Singh, H.R., Dobriyal, A.K. and Pokhriyal, R.C. 1987. Static bioassay with some freshwater teleosts exposed to Urea. *Himalayan J. Env. Zool.* 1: 70-75
- 27. Dobriyal, A.K. 1988. Fecundity of the Chinese silver carp *Hypophthalmichthys molitrix* (Val.) from Gujartal Fish Farm, Jaunpur, U.P. *Proc. Indian Acad. Sci.* (Anim. Sci.). 97(2):169-173.
- 28. Dobriyal, A.K. and Singh, H.R. 1988. Ecological basis for the ichthyofaunal variation in two hillstreams of Garhwal Himalaya. In: M.Mohan Joseph (Ed.) *The First Indian Fisheries Forum Proceedings., Asian Fishery Society, Indian Branch*. Pp. 313-317.
- 29. Dobriyal, A.K. and Kumar, N. 1988. Fish and fisheries of the river Mandakini. In: R.D. Khulbe (ED.) *Perspectives in Aquatic Biology*. Papyrus Publishing Co., New Delhi. Pp. 337-340.
- 30. Dobriyal A.K., Bahuguna, A.K.and Singh, H.R.1988. Morphometric characters and their relationships in two *Noemacheilus* species from Garhwal Himalaya. *Agri. Biol. Res.* 4 (2): 21-24.
- 31. Dobriyal, A.K. 1988. Otolith as an indicator of age in the carp *Barilius bendelisis* (Ham.). *Agri. Biol. Res.* 4: 67-69.
- 32. Dobriyal A.K., and Bahuguna, A.K. 1988 Determination of acute toxicity levels of Urea to *Barilius barna* (Ham.) *Himalayan Chemical and Pharmaceutical Bulletin* 5: 15-16.
- 33. Agrawal, N.K., Dobriyal, A.K., Pokhriyal, R.C., Bahuguna, A.K. and Singh, H.R. 1988. Fecundity of the hillstream loach *Noemacheilus montanus*. *Himalayan J. Env. Zool*. 2: 133-135.
- 34. Dobriyal, A.K. and Singh, H.R. 1989. Ecology of rhithrofauna in the torrential waters of Garhwal Himalaya, India: Fecundity and sex ratio of *Glyptothorax pectinopterus* (Pisces). *Vest. Cs. Spolec. Zool.* 53: 17-25

- 35. Dobriyal, A.K. and Singh, H.R. 1989. Observations on temporal trends of phytoplankton diversity in the river Nayar of Garhwal Himalaya. *J. Freshwater Biol.* 1: 1-6.
- 36. Dobriyal, A.K. and Singh, H.R. 1989. Spawning ecology of a hillstrteam minor carp *Puntius chlinoides*. *Advances in Biosciences*. 8: 139 148.
- 37. Dobriyal, A.K., Bahuguna, A.K., Kotnala, C.B., Kumar, N. and Singh, H.R. 1989. A note on the snout abnormality in *Barilius bendelisis*. *Himalayan J. Env. Zool*. 3: 248-150.
- 38. Dobriyal, A.K., Kumar, N. Bahuguna, A.K. and Kotnala, C.B. 1989. Diurnal variations in some physico chemical parameters of Eastern Nayar. *Himalayan Chemical and Pharmaceutical Bulletin*. 6: 42-44.
- 39. Pokhriyal, R.C., Dobriyal, A.K., Singh, H.R., Kumar, N. and Kotnala, C.B. 1989. Determination of acute toxicity levels of Urea to a hillstream fish *Barilius bendelisis* (Ham.) *Himalayan J. Env. Zool.* 3: 149-153.
- 40. Dobriyal, A.K. and Singh, H.R. 1990. Ecological studies on the age and growth of *Barilius bendelisis* (Ham.) from India. *Arch. Hydrobiol.* 118: 93-103.
- 41. Dobriyal, A.K., Bahuguna, A.K. and Kotnala, C.B., Kumar, N. and Singh, H.R. 1990. A case study on the reproductive biology of common carp, *Cyprinus carpio* (Pisces: Cyprinidae) from India. *Acta Soc. Zool. Bohemoslov.* 54:91-96.
- 42. Dobriyal, A.K. 1990. Garhwal kaa Matsya Paryawaran. *Nav Raah Nayi Chetana*.3: 8-11.
- 43. Singh, H.R., Dobriyal, A.K. and Kumar, N. 1991. Hillstream Fishery potential and developmental issues. *J. Inland Fish. Soc. India*. 23: 60-68.
- 44. Dobriyal, A.K. 1991. An appraisal of the fishery resource of riverine ecosystems of Garhwal, Central Himalaya. In: Bhatt, S.D. and Pandey, R.K. (Ed.). *Ecology of Mountain waters*. Ashish Publishing House, New Delhi. Pp. 306-312.
- 45. Dobriyal, A.K. and Negi, K.S. 1991. Food analysis of a hillstream fish *Glyptothorax madarspatanum* (Day) in the river Nayar of Garhwal Himalaya. *Bioved* 2: 147-150
- 46. Dobriyal, A.K., Kumar, N., Kotnala, C.B., Bahuguna, A.K. and Singh, H.R. 1991. Preliminary observations on seasonal trends in macrozoobenthic diversity in the river Nayar of Garhwal Himalaya. In: Sehgal, K. L. (Ed.): *Recent researches in Coldwater Fisheries*. Today and Tommorrow Printers and Publishers, New Delhi Pp. 119-127.
- 47. Khanna, D.R., Badola, S.P. and Dobriyal, A.K. 1993. Plankton ecology of the river Ganga at Chandighat, Hardwar. In: Singh, H.R. (Ed.) *Advances in Limnology*. NPH, Delhi. Pp. 171-174
- 48. Dobriyal, A.K., Bahuguna, A.K. and Kotnala, C.B. 1992. Dose standardisation of pituitary gland extract for the induced breeding of Indian Major Carps. *Acta Soc. Zool. Bohemoslov.* 56: 1-5
- 49. Dobriyal, A.K., Bahuguna, A.K., Kotnala, C.B., Kumar, N. and Singh, H.R. 1992. Ecological studies on the fish and fisheries of the river Nayar. In: Sehgal, K.L. (Ed.) *Recent Researches in Coldwater Fisheries*. Today and Tomorrow Printers and Publishers, New Delhi Pp. 93-98
- 50. Khanna, D.R., Badola, S.P., Singh, H.R. and Dobriyal, A.K. 1992. Observations on seasonal trends in diatomic diversity in the river Ganga at Saptsarovar, Hardwar. In: Sehgal, K.L. (Ed.) *Recent Researches in Coldwater Fisheries*. Today and Tommorrow Printers and Publishers, New Delhi pp. 99-107.
- 51. Kumar, N. and Dobriyal, A.K. 1992. Some observations on water mites of a hillstream Khandagad in Garhwal Himalaya. *J. Freshwater Biol.* 4: 193-197.

- 52. Dobriyal, A.K., Bahuguna, A.K. Kumar, N. and Kotnala, C.B. 1993. Ecology and seasonal diversity of plankton in a spring-fed stream Khanda gad of Garhwal Himalaya. In Singh, H.R. (Ed.) *Advances in Limnology*. NPH, New Delhi pp.175-180.
- 53. Dobriyal, A.K., Bahuguna, A.K. and Kotnala, C.B. 1993. A report on the efforts made for the conservation of fishery in Nayar valley of Garhwal Himalaya. *Advances in Biosciences*. 11: 1-6.
- 54. Dobriyal, A.K. and Kotnala, C.B. 1993. Primary productivity of periphyton in the river Eastern Nayar at Satpuli, Pauri Garhwal. *Bioved*, 4: 267-268.
- 55. Singh, H.R., Nautiyal, P., Dobriyal, A.K., et.al. 1994. Water quality of the river Ganga (Garhwal Himalayas). *Acta Hydrobiol*. 36: 3 15.
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