

Fish diversity of Kamala River, Siraha, Nepal

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Abstract

Eighty one species of fish spread over 17 families and 44 genera were collected during September 2015 to August 2016 from the Kamala River, Nepal. Cyprinidae family was represented by 41 species and *Labeo* was the largest genus.

Key words: Ichthyology, Cyprinidae, *Catla catla*, Siwalik range.

Introduction

Nepal is rich in freshwater resources which comprise three major river systems, Koshi, Gandaki and Karnali in the east, middle and far west respectively. Besides rivers there are lakes, ponds, reservoirs and streams. These water bodies have a total of 231 indigenous freshwater fish species (Rajbanshi, 2012).

There are several fragmentary surveys of fishes inhabiting almost all water bodies available in Nepal by national as well as international Ichthyologists. Contributions made by Srivastava (1968), Subba (1995), Subba & Ghosh (1996), Bhagat (1998), Niroula & Subba (2004), Shrestha (2008, 2013) and Rijal *et al.* (2014) were of special mention. However, there is meager information about the fishes of Kamala river.

Study site

Kamala river (Fig. 1) lies in between Saptari and Dhanusa districts in Tarai. This river originates from the hills of Mahabharat Range near Sindhuligarhi (Lat. 27°15'N, Long. 85°57'E, Altitude 1200 m msl) in Sindhuli district. It takes its coverage towards south making several twists and turns inside the Shiwalik hills and ultimately it emerges out from a gorge for Tarai at Chisapani where it receives water from Tao and Baijnath Khola (river) at Mairi.

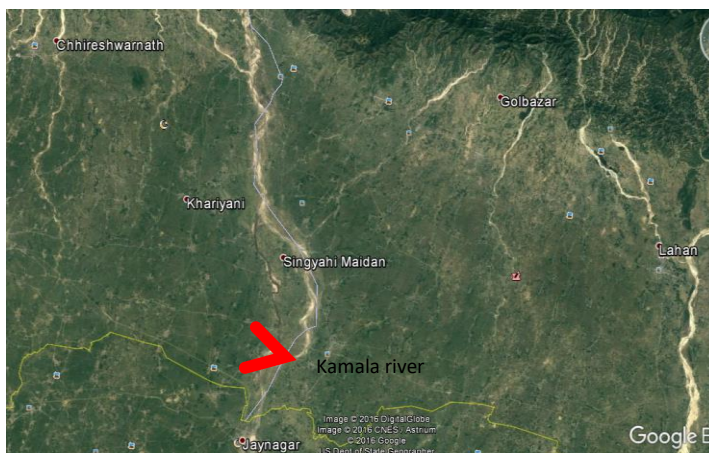


Figure 1. Map of study area.

In summer, it swells up and becomes devastating river so it is considered as sorrow of Bihar next to Koshi river. In rainy season, many species of migratory fishes enter the river from the Ganga via Bagmati and reach upto its up streams. Besides migratory fish species there are numbers of resident fishes in Shiwalik range of the river as well as in Tarai part. The total length and catchment area of Kamala river, is 208 km and 2,744 km², respectively.

Materials and Methods

With a view to collect maximum fish species the study site was divided into two sites A and B, Patharwa Ghat and Basbitta Ghat, respectively. From both sites fishes were collected monthly from September, 2015 to August, 2016. The fishes were caught with the help of local fishermen using locally available devices. The fresh fishes were washed properly for photography. Then they were preserved in 8% formalin adding a few drops of glycerine so as to preserve their natural colour from fading out for a long time.

The preserved specimens were brought to Zoology lab of the Department of Zoology, Post Graduate Campus, Biratnagar where they were identified following standard taxonomic books (Talwar & Jhirgram, 1991; Shrestha, 2008).

Results and Discussion

The fishes identified were arranged in their systematic ranks upto family as follows.

- I Order– Clupeiformes
 - Sub order– Clupeoidei
 - Family– Clupeidae
 - 1. *Gudusia chapra* (Hamilton- Buchanan) Suiya
 - 2. *G. variegata*(Day) Suiya
 - Family– Engraulidae
 - 3. *Setipinna phasa* (Hamilton- Buchanan) Phasi
- II Order– Osteoglossiformes
 - Sub order– Notopteroides
 - Family– Notopteridae
 - 4. *Chitala chitala* (Hamilton- Buchanan) Bhuna
 - 5. *Notoptenus notopterus* (Pallas) Lepsi
- III Order– Cypriniformes
 - Family– Cyprinidae
 - Sub Family– Cyprininae
 - 6. *Catla catla* (Hamilton Butchnon), Vakur
 - 7. *Chagunius chagunio* (Hamilton Buchnan), Chaguni, Patherohati, Kasree
 - 8. *Cirrhinus mrigala* (Hamilton- Buchanan), Mrigal, Naini
 - 9. *C. reba* (Hamilton-Buchanan), Reba, Mrygal
 - 10. *Labeo angra* (Hamilton-Buchanan), Rohu
 - 11. *L. bata* (Hamilton-Buchanan), Rohu
 - 12. *L. boga* (Hamilton-Buchanan), Boga
 - 13. *L. caeruleus* (Day), Bishari
 - 14. *L. calbasu* (Hamilton-Buchanan), Bashari
 - 15. *L. dero* (Hamilton-Buchanan), Gurdi

16. *L. dyocheilus* (Mc Clelland), Gardi
17. *L. fimbriatus* (Bloch), Boi
18. *L. gonius* (Hamilton-Buchanan), Karsa
19. *L. pangusia* (Hamilton-Buchanan), Kalaacha
20. *L. rohita* (Hamilton-Buchanan), Rohu
21. *Puntius chola* (Hamilton-Buchanan), Sidhre, pothiya
22. *P. conchonius* (Hamilton-Buchanan), Pothi
23. *P. gonionotus* (Bleeker), Pothiya
24. *P. phutunio* (Hamilton-Buchanan), Pothi
25. *P. sarana* (Hamilton-Buchanan), Pothi
26. *P. sophore* (Hamilton-Buchanan), Pothi, Sidhra
27. *P. terio* (Hamilton-Buchanan), Pothi
28. *P. ticto* (Hamilton-Buchanan), Tite pothi
Sub Family: Cultrinae
29. *Chela labuca* (Hamilton-Buchanan), Chalwa
30. *Salmostoma bacaila* (Hamilton- Buchanan), Galphulani
Sub Family: Danioninae (Rasborinae)
31. *Amblypharyngodon microlepis* (Bleeker), Mada, Dhawai
32. *A. mola* (Hamilton-Buchanan), Mada, Dhawai
33. *Aspidoparia jaya* (Hamilton-Buchanan), Mara
34. *A. morar* (Hamilton-Buchanan), Karangi
35. *Barilius barna* (Hamilton-Buchanan), Pati, Faketa
36. *B. bendelisis* (Hamilton-Buchanan), Gurdere
37. *B. shacra* (Hamilton-Buchanan), Faketa
38. *B. vagra* (Hamilton-Buchanan), Faketa
39. *Danio aequipinnatus* (Mc Clelland), Chithari pothi
40. *D. deuaric* (Hamilton-Buchanan), Chithari pothi
41. *Esomus danricus* (Hamilton-Buchanan), Dedhaura
42. *Parluciosoma daniconius* (Hamilton-Buchanan), Dedhaura
43. *Raiamas bola* (Hamilton-Buchanan), Goha
44. *R. guttatus* (Day) Thople Bola
Sub family– Garrinae
45. *Garra annandalei* (Hora), Buduna
46. *G. mullya* (Sykes), Mate Buduna
Family– Psilorhynchidae
47. *Psilorhynchus balitora* (Hamilton-Buchanan)
48. *P. sucatio* (Hamilton-Buchanan)
Family– Cabitidae
Sub family– Memochellinae
49. *Acanthocobotis botia* (Hamilton-Buchanan), Baghe
50. *Schistura himachalensis* (Menon), Gadela
Sub family– Cobitinae
51. *Lepidocephalus guntea* (Hamilton-Buchanan), Lata
52. *Somileptes gongota* (Hamilton-Buchanan), Baluwari, Goira
Sub family– Botinae
53. *Botia lohachata* (Chaudhuri), Y-Loach, Baghi, Getu

- IV Order– Siluriformes
 Family– Bagridae
 54. *Aorichthys aor* (Hamilton-Buchanan), Kanti
 55. *A. seenghala* (Sykes), Tenger, Kanti
 56. *Mystus bleekeri* (Day), Tengera
 57. *M. cavasius* (Hamilton-Buchanan), Tengra
 58. *M. tengra* (Hamilton-Buchanan), Tengra
 59. *M. vittatus* (Bloch) Tengra
 Family– Siluridae
 60. *Ompok bimaculatus* (Bloch), Papta
 61. *O. pabda* (Hamilton-Buchanan), Pabdah
 62. *Wallago attu* (Schneider) Buwari, Bohari
 Family– Schilbeidae
 Sub family– Aillinae
 63. *Ailia coila* (Hamilton-Buchanan), Patsi
 Sub family– Schilbeinae
 64. *Clupisoma garua* (Hamilton-Buchanan), Jalkapoor
 65. *Eutropiichthys vacha* (Hamilton-Buchanan), Bachawa
 Family– Sisoridae
 66. *Gagata cenia* (Hamilton-Buchanan), Ganfak
 67. *Sisor rhabdophorus* (Hamilton-Buchanan)
- V Order– Beloniformes
 Family– Belonidae
 68. *Xenentodon cancila* (Hamilton-Buchanan), Kauwa
- VI Order- Synbranchiformes
 Family- synbranchidae
 69. *Monopterusuchia* (Hamilton-Buchanan), Mud Eel, Amibam
 Sub order- Mastacembeloidei
 Family– Mastacembelidae
 70. *Macrognathus aral* (Bloch & Schneider) Gainchi
 71. *M. pancalus* (Hamilton-Buchanan), Kathgainchi
 72. *Mastacembelus armatus* (Lacepede), Chucho Bam
- VII Order- Perciformes
 Sub order- percoidei
 Family- Ambassidae (Chandidae)
 73. *Chanda nama* (Hamilton- Buchanan), chanerbijuwa, chanda
 74. *Pseudambassis baculis* (Hamilton-Buchanan), Chanari
 Sub order- Anabantoidei
 Family- Anabantidae
 75. *Anabus cobjius* (Hamilton-Buchanan), Kabai
 76. *A. testudineus* (Bloch) Kabai
 Family– Belontiidae
 Sub family- Trichogasterinae
 77. *Colisa faciatus* (Bloch & Schneider), Kotari
 78. *C. lalius* (Hamilton-Buchanan), Kotari
 Sub order- Channoidae

Family- Channidae

79. *Channa orientalis* (Bloch & Schneider)
 80. *C. punctatus* (Bloch)
 81. *C. stritus* (Bloch)

A total of 81 species of fish belonging to 17 families was collected from Kamala river. The richest family was Cyprinidae which is represented by 4 species. Under the family cyprinidae the genus *Labeo* occupied the first position including 11 species. In the second position was, *Puntius* which comprised 8 species. The genus *Barilius* had 4 species. Rest genera *Cirrhinus*, *Amblypharyngodon*, *Aspidoparia*, *Damio*, *Raimas* and *Gaura* comprised 2 species, whereas genera *Catla*, *Chagunius*, *Chela*, *Salmostoma*, *Esomus* and *Parluciosoma* had only one representative for each.

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Reference

- Bhagat, R.P. 1998. Fishes from Morang District of Eastern Nepal. *Jour. Nat. Hist. Mus.* **17(1-4)**: 31-38.
- Niroula, L.P. & B.R. Subba 2004. *Fish Diversity of Kankai River with reference to Jhapa district, Nepal*. Abstracts of Natural Resources Management, Feb. 13-14, 2004, Biratnagar.
- Rajbanshi, K.C. 2012. *Biodiversity and distribution of freshwater fishes of central Nepal Himalayan region*. Nepal Academy of Science and Technology, Khumaltar. NEFIS. 65p.
- Rijal, P.K., M.K. Shrestha, A.K. Singh & B.R. Dahal 2014. Fish diversity and their contribution in livelihoods of fishers in Koshi River basin. *Nepalese Journal of Aquaculture and Fisheries* **1**: 109-123.
- Shrestha, J. 2013. *Biodiversity of fish appeared in (biological diversity and conservation)*. Nepal Academy of Science and Technology (NAST) Kathmandu, Nepal. Nepalpedia series No. 2.
- Shrestha, T.K. 2008. *Ichthyology of Nepal: A study of fishes of the Himalayan waters*. Himalayan Ecosphere, Kathmandu.
- Shrivastava, G. 1968. *Fishes of eastern U.P.* Vishwavidyalaya Prakashan, Varanasi.
- Subba, B.R. 1995. Report on the occurrence of a hill stream fish, *Olyra longicaudata* (McClelland, 1842), Siluriformes, Olyridae from Kadya River of Nepal. *Freshwater Biol.* **7(2)**: 155-157.
- Subba, B.R. & T.K. Ghosh 1996. A new record of the pigmy barb *Puntius phutunio* (Ham.) from Nepal. *Freshwater Biol.* **8(3)**: 159-161.
- Talwar, P.K. & A.G. Jhirgram 1991. *Inland fishes of India and adjacent countries*, Vol. I and II. Oxford and IBH publishing Co. New Delhi.