

NOTES ON FISHES FROM BHARATPUR DISTRICT, RAJASTHAN

By

JAGDISH CHANDRA MOONA

Department of Zoology, Ramjas College, Delhi

(With 1 Text-figure)

CONTENTS

	PAGE
I—Introduction	59
II—Physical features	60
III—Classified list of the fishes collected and their local names	61
IV—Description of Localities, with lists of fishes collected from each locality	62
V—General Remarks ..	65
VI—Remarks on the possibilities of fish culture	66
VII—References	66

I—INTRODUCTION

Rajasthan, although an arid zone, has a number of water sources where fishes flourish very well. Chopra and Roonwal of the Zoological Survey of India surveyed this area in 1941, and in 1948 Pradhan collected several fishes from the same region. The entire collection has been systematically studied and recorded by Mathur (1953). All the surveys were made particularly in the region of Aravalli Range from the states of Udaipur, Jodhpur, Sirohi and Palanpur, but no attempt has so far been made to collect fishes from the eastern part of Rajasthan which remains unexplored. On the suggestion of Dr. B. M. Sinha, Head of the Department of Zoology, Meerut College, Meerut, I took up the work of collection of fishes from the eastern districts of Rajasthan. This paper is based on the collections made from Bharatpur District, adjoining the Agra and Mathura Districts of Uttar Pradesh.

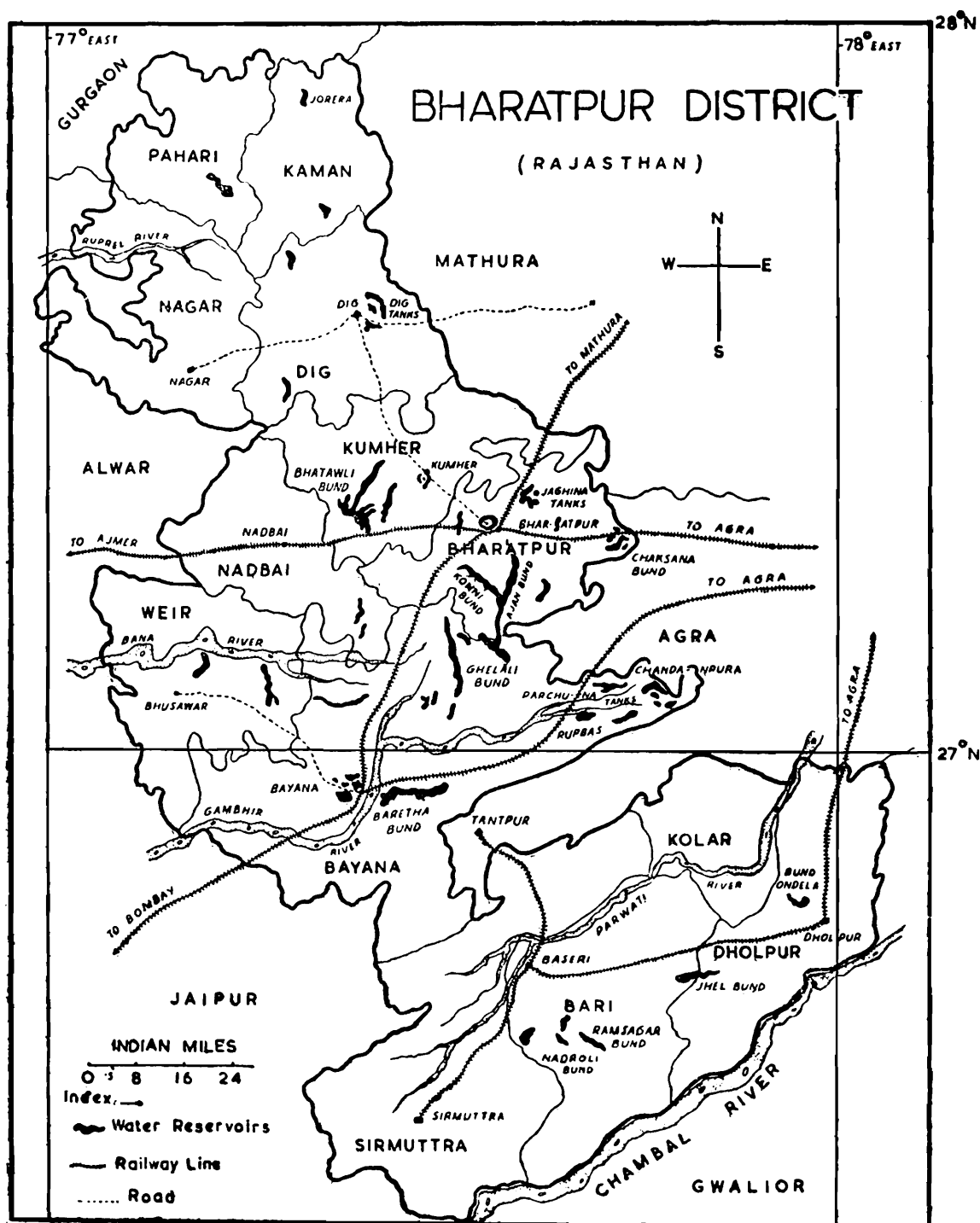
I am indebted to Dr. M. L. Bhatia, Head of the Department of Zoology, University of Delhi, for valuable suggestions and correcting the manuscript. Thanks are due to Dr. N. N. Majumdar for helping me in the identification of the fishes and in preparation of the manuscript. I am also thankful to Dr. A. G. K. Menon of the Zoological Survey of India, for confirming the identifications.

II—PHYSICAL FEATURES

Bharatpur District is situated at the Eastern border of Rajasthan and is thus surrounded by the Agra and Mathura Districts of U. P. on one side, Gurgaon District on its north, Alwar and Jaipur Districts on its west, and Gwalior on its south. It occupies a central position between the Uttar Pradesh, Madhya Pradesh and parts of Rajasthan. The whole district is divided into two divisions, Bharatpur and Dholpur.

Bharatpur includes nine tehsils—Pahari, Kaman, Nagar, Dig, Nadbai, Kumher, Bharatpur, Weir and Bayana, whereas Dholpur includes four tehsils—Dholpur, Kolar, Bari and Sirmuttra.

A number of water sources in the form of bunds, tanks, pools and rivers are present in this district, out of which the places shown in the map were surveyed for fish fauna.



TEXT-FIG. 1.—Map of Bharatpur District, Rajasthan, showing the various water sources and localities from where fish were collected.

III—CLASSIFIED LIST OF THE FISHES COLLECTED AND THEIR LOCAL NAMES

The Zoological Survey of India has confirmed the identification of the fishes listed herein and the classification followed is the one proposed by Berg (1940).

Class TELEOSTOMI

Subclass ACTINOPTERYGII

Order Cypriniformes

Division Cyprini

Suborder Cyprinoidei

Family CYPRINIDAE

Subfamily *CYPRININAE*

- | | |
|--|------------|
| 1. <i>Labeo rohita</i> (Ham.) | 'Rohu' |
| 2. <i>Labeo calbasu</i> (Ham.) | 'Kalonli' |
| 3. <i>Labeo gonius</i> (Ham.) | 'Khurchia' |
| 4. <i>Labeo dyocheilus</i> (McClell.) | — |
| 5. <i>Cirrhina mrigala</i> (Ham.) | 'Mrigal' |
| 6. <i>Catla catla</i> (Ham.) | 'Katla' |
| 7. <i>Barbus (Puntius) sarana</i> Ham. | 'Puthi' |
| 8. <i>Barbus (Tor) tor</i> Ham. | 'Mahasir' |
| 9. <i>Chela bacaila</i> (Ham.) | 'Chela' |

Division Siluri

Suborder Siluroidei

Family SILURIDAE

- | | |
|---|---------|
| 10. <i>Wallago attu</i> (Bloch & Schn.) | 'Lachi' |
| 11. <i>Ompok bimaculatus</i> (Bloch) | 'Papta' |

Family BAGRIDAE

- | | |
|---|------------|
| 12. <i>Mystus (Osteobagrus) seenghala</i> (Sykes) | 'Singhara' |
| 13. <i>Mystus cavasius</i> (Ham.). | 'Tigra' |

Family SACCOBRANCHIDAE

- | | |
|--|----------|
| 14. <i>Heteropneustes fossilis</i> (Bloch) | 'Singhi' |
|--|----------|

Order Ophiocephaliformes

Family OPHIOCEPHALIDAE

- | | |
|-------------------------------------|----------|
| 15. <i>Channa punctatus</i> (Bloch) | 'Shauli' |
| 16. <i>Channa marulius</i> (Ham.) | 'Shaul' |

Order Perciformes

Suborder Gobioidi

Family GOBIIDAE

17. *Glossogobius giuris* (Ham.) 'Bheula'

Suborder Percoidei

Family CENTROPOMIDAE

18. *Ambassis nama* (Ham.) 'Chanda'

Order Mastacembeliformes

Family MASTACEMBELIDAE

19. *Mastacembelus armatus* (Lacép.) 'Bam'

Order Clupeiformes

Suborder Notopteroidei

Family NOTOPTERIDAE

20. *Notopterus chitala* (Ham) 'Cheetal'
21. *Notopterus notopterus* (Pallas.) 'Patulia'

Suborder Clupeoidei

Family CLUPEIDAE

Subfamily CLUPEINAE

22. *Gadusia chapra* (Ham.) 'Khera'

IV—DESCRIPTION OF LOCALITIES, WITH LISTS OF FISHES COLLECTED FROM EACH LOCALITY

1. AJAN BUND.—It is situated at a distance of seven miles from Bharatpur City. It is a well managed bund under the supervision of the Government of Rajasthan. The water in this bund is controlled by the gates and, when needed, superfluous water is removed. The total water area of this bund is thirteen square miles and maximum water depth is about 15 feet. The following fishes were collected on the 5th June, 1956.

Note.—ex., example; exs., examples.

- | | |
|--|--------|
| 1. <i>Notopterus notopterus</i> (Pallas) | 5 exs. |
| 2. <i>Notopterus chitala</i> (Ham.) | 2 „ |
| 3. <i>Labeo rohita</i> | 3 „ |
| 4. <i>Labeo gonius</i> (Ham.) | 5 „ |
| 5. <i>Labeo calbasu</i> (Ham.) | 4 „ |
| 6. <i>Mystus</i> (<i>Osteobagrus</i>) <i>seenghala</i> (Sykes) | 4 „ |
| 7. <i>Wallago attu</i> (Bloch & Schn.) | 5 „ |
| 8. <i>Channa punctatus</i> (Ham.) | 2 „ |
| 9. <i>Chela bacaila</i> (Ham.) | 1 ex. |
| 10. <i>Ompok bimaculatus</i> (Bloch) | 1 „ |

2. **KOHNI BUND.**—It is situated seven miles away from Bharatpur City and is connected with Ajan bund by an elbow-shaped band, hence the name. It has an area of about 8 square miles with a water depth of about 15 feet. This bund is also under the management of the Government of Rajasthan. In addition to the species found in Ajan Bund, the following species were collected from this bund on the 5th June, 1956.

1. <i>Barbus (Puntius) sarana</i> Ham.	3 exs.
2. <i>Barbus (Tor) tor</i> Ham.	5 „
3. <i>Glossogobius giuris</i> (Ham.)	1 ex.
4. <i>Mastacembelus armatus</i> (Lacép.)	2 exs.
5. <i>Cirrhina mrigala</i> (Ham.)	5 „

3. **BARETHA BUND.**—It is situated at a distance of 32 miles from Bharatpur City and is also under the control of Government of Rajasthan. It is the biggest bund in Bharatpur district, having an area of about 30 square miles with a maximum water depth of 22 feet. Fishes of great commercial value are present in this bund. The following fishes were collected on the 12th June, 1956.

1. <i>Labeo rohita</i> (Ham.)	5 exs.
2. <i>Labeo calbasu</i> (Ham.)	5 „
3. <i>Wallago attu</i> (Bloch & Schn.)	5 „
4. <i>Mystus (Osteobagrus) seenghala</i> (Sykes)	3 „
5. <i>Channa marulius</i> (Ham.)	1 ex.
6. <i>Barbus (Puntius) sarana</i> Ham.	1 „
7. <i>Notopterus chitala</i> (Ham.)	1 „

4. **AGHAPUR BUND.**—It is situated 10 miles away from Bharatpur City and is about 10 to 12 feet in water depth. The following fishes were collected on the 13th June, 1956.

1. <i>Labeo rohita</i> (Ham.)	4 exs
2. <i>Barbus (Puntius) sarana</i> Ham.	3 „
3. <i>Mystus (Osteobagrus) seenghala</i> (Sykes)	3 „
4. <i>Wallago attu</i> (Block & Schn.)	5 „
5. <i>Channa punctatus</i> (Bloch)	1 ex.
6. <i>Labeo gonius</i> (Ham.)	1 „

5. **CHAKSANA BUND, DITCHES AND PONDS.**—They are situated 10 miles away from Bharatpur City. Near the bund are some ditches and ponds from where small fishes were collected in large numbers. The following fishes were collected on the 20th December, 1956.

1. <i>Channa punctatus</i> (Bloch)	1 ex.
2. <i>Heteropneustes fossilis</i> (Bloch)	5 exs.
3. <i>Glossogobius giuris</i> (Ham.)	1 ex.
4. <i>Labeo rohita</i> (Ham.)	5 exs.
5. <i>Labeo gonius</i> (Ham.)	5 „
6. <i>Labeo dyocheilus</i> (McClell.)	1 ex.
7. <i>Catla catla</i> (Ham.)	2 exs.
8. <i>Wallago attu</i> (Bloch & Schn.)	3 „
9. <i>Mystus (Osteobagrus) seenghala</i> (Sykes)	„

6. MOAT AROUND THE BHARATPUR FORT.—It is about 15 feet deep and 100 feet wide, and encircles the Fort. The following fishes were collected on the 20th December, 1956.

1. <i>Gadusia chapra</i> (Ham.)	5 exs.
2. <i>Mastacembelus armatus</i> (Lacép.)	5 „
3. <i>Ambassis nama</i> (Ham.)	4 „
4. <i>Channa marulius</i> (Ham.)	1 ex.
5. <i>Labeo rohita</i> (Ham.)	5 exs.
6. <i>Labeo gonius</i> (Ham.)	2 „

7. DIG TANKS.—They are situated 26 miles away from the City of Bharatpur with the water depth of 6 to 8 feet. The following fishes were collected on the 24th December, 1956.

1. <i>Wallago attu</i> (Bloch & Schn.)	5 exs.
2. <i>Labeo rohita</i> (Ham.)	5 „
3. <i>Catla catla</i> (Ham.)	2 „

8. RUPREL RIVER.—It runs from Alwar district boundary to Sikari village in Nagar tehsil of Bharatpur district. It is a temporary source of water, which exists only during the rainy season. The following fishes were collected on the 20th July, 1956.

1. <i>Channa punctatus</i> (Bloch)	2 exs.
2. <i>Labeo rohita</i> (Ham.)	5 „

9. BANA RIVER.—It is a small river passing through the centre of Weir tehsil. It dries up during the summer months. The following fishes were collected on the 5th August, 1956.

1. <i>Labeo calbasu</i> (Ham.)	2 exs.
2. <i>Labeo rohita</i> (Ham.)	4 „
3. <i>Cirrhina mrigala</i> (Ham.)	5 „

10. GAMBHIR RIVER.—It passes through the centre of the Bayana tehsil. The following fishes were collected on the 5th August, 1956.

1. <i>Labeo rohita</i> (Ham.)	5 exs.
2. <i>Labeo calbasu</i> (Ham.)	2 „

11. PARCHUNA TANKS.—They are situated at a distance of 14 miles from Bharatpur City. The following fishes were collected on the 21st December, 1956.

1. <i>Wallago attu</i> (Bloch & Schn.)	5 exs.
2. <i>Channa punctatus</i> (Bloch)	1 ex.
3. <i>Labeo rohita</i> (Ham.)	5 exs.

12. KHANWAY BUND.—It is 17 miles away from Bharatpur City in Bayana tehsil. The following fishes were collected on the 25th July, 1956.

1. <i>Labeo rohita</i> (Ham.)	2 exs.
2. <i>Wallago attu</i> (Bloch & Schn.)	2 „
3. <i>Ompok bimaculatus</i> (Bloch)	1 ex.

13. RAMSAGAR BUND.—It is in Dholpur Division. The following fishes were collected on the 4th July, 1956.

1. <i>Wallago attu</i> (Bloch & Schn.)	5 exs.
2. <i>Mystus (Osteobagrus) seenghala</i> (Sykes)	2 „
3. <i>Labeo rohita</i> (Ham.)	4 „
4. <i>Mastacembelus armatus</i> (Lacép.)	2 „
5. <i>Channa marulius</i> (Ham.)	1 ex.
6. <i>Catla catla</i> (Ham.)	1 „

14. ONDELA BUND.—It is situated at a distance of 5 miles from Dholpur City and is about 8 feet in depth. The following fishes were collected on the 24th December, 1956.

1. <i>Labeo dyocheilus</i> (McClell.)	1 ex.
2. <i>Labeo calbasu</i> (Ham.)	5 exs.
3. <i>Labeo gonius</i> (Ham.)	1 ex.
4. <i>Notopterus notopterus</i> (Pallas)	1 „
5. <i>Notopterus chitala</i> (Ham.)	1 „
6. <i>Barbus (Tor) tor</i> Ham.	1 „

15. PARWATI RIVER.—It passes through the northern part of Dholpur region from Sirmuttra to Koları tehsil. It also dries up during summer season, but during rains fries can be collected from it. The following fishes were collected on the 8th July, 1956.

1. <i>Barbus (Puntius) sarana</i> Ham.	4 exs.
2. <i>Labeo calbasu</i> (Ham.)	2 „
3. <i>Labeo rohita</i> (Ham.)	5 „

Out of the entire collections made from different water sources the following were reported by Mathur (1953).

1. *Barbus (Puntius) sarana* Ham.
2. *Labeo calbasu* (Ham.)
3. *Glossogobius giuris* (Ham.)
4. *Channa punctatus* (Ham.)
5. *Mastacembelus armatus* (Lacép.)

The other fishes listed above have not yet been reported from Rajasthan.

V—GENERAL REMARKS

Five different species of fishes of economic importance, namely, *Labeo calbasu* (Ham.), *Labeo rohita* (Ham.), *Mystus (Osteobagrus) seenghala* (Sykes), *Wallago attu* (Bloch & Schn.), and *Cirrhina mrigala* (Ham.), are very commonly found in whole of the district and good supply can be readily obtained from these places.

VI—REMARKS ON THE POSSIBILITIES OF FISH CULTURE

The whole district of Bharatpur has a large number of bunds, some of which are so big that water remains in them for a major period in the year and are therefore suitable for the fish culture. Baretha bund is the only perennial water-bund and can be used for stocking fish, as it has a depth of 22 feet, which can allow all economically important fishes to develop to their maximum size.

Besides this, Ajan bund and Kohni bund, which are very near Bharatpur City proper, can serve the purpose of good fish culture grounds. Although a large number of fry is available during the rainy season, the Government has not yet taken any step to make it suitable for fish culture. Attention of fish experts of the Rajasthan Government can be of great help in the advancement of pisciculture in this part of the state.

VII—REFERENCES

AUDEN, J. B. 1950. Introductory report on the ground-water resources of western Rajasthan.—*Bull. Geol. Surv. India*, (B), pp. 1-59.

BERG, L. S. 1940. Classification of fishes both recent and fossil.—*Trav. Inst. Zool. Acad. Sci. U. S. S. R.*, 5, Leningrad.

MATHUR, B. B. L. 1953. Notes on fishes from Rajasthan, India.—*Rec. Indian Mus.*, Delhi, 50, pp. 105-110.