Sisoridae is an exclusively Asian family of bottom dwelling catfishes, with more or less thickened leathery skins with specialised unculiferous tubercules or polygonal plaques (Roberts, 1989), typically inhabiting high gradient lowland or mountain streams, with adults ranging in size from 20mm to more than 3m. Many of the genera are disruptively or cryptically coloured and have adhesive organs (labial or thoracic) with which they cling to the substrate. The family has its greatest diversity in the Indian subcontinent. Out of the 20 existing living genera, 18 are found in Indian subcontinent and 12 of them bearing 38 species inhibit in the Brahmaputra basin. Bagarius bagarius, B. yarellii, Gagata cenia and Gagata gagata are regarded as food fish, rest are of ornamental value.

**Key words:** Freshwater fish diversity, Brahmaputra basin, North eastern Himalayas and fish, Sisoridae, Sisorids species

**INTRODUCTION**

The river Brahmaputra with its large number of perennial rivers, connected wetlands, hill streams other tributaries and paddy fields etc provide the occurrence of a large varieties of freshwater ichthyospecies. The National Bureau of Fish Genetics Resources (Viswanath et al, 2007) and other workers (Motowani et al, 1962; Nath and Dey 2000, Sinha, 2011 and Goswami et al, 2007) have reported the
occurrence of more than 300 species of freshwater species of fishes. The riverine
basin is characterized by the presence of several varieties of exotic species along
with some migratory species. In the present communication we report the
occurrence of sisorids species, a special group having peculiar morphological and
torrential adaptive characters species that has been encountered in the Brahmaputra
basin.

MATERIALS AND METHODS

Fishes were identified after Jayaram, 2010, Talwar and Jhingran, 1991. Further it is confirmed after Eschmeyer, 2006 and Fish Base.org. (2010). Certain
species were studied in detail with reference to their structural peculiarities and
distribution.

1. *Bagarius bagarius* (Hamilton-Buchanan)

Characteristics: Body rather elongate, its depth 5.6 to 7.2 times in standard
length. Head depressed, its length 2.9 to 3.3 times in standard length. Gillrakers 6 to
9 on first arch. Mouth inferior and crescentic; barbells four pairs. Dorsal fin inserted
nearer to adipose fin than to snout –tip; adipose fin origin slightly to markedly
posterior to a vertical line through anal fin origin. Pelvic fins inserted anterior to a
vertical line through base of dorsal fin ray. Abdominal vertebrae 17 to 20.

Fin formula: D I 7; A iii 9-12; P I 9-12; V i 5.

Fishery – This is a relatively small, primitively entomophagous species,
apparently not exceeding 19cm standard length. It is mainly an inhabitant of rapids
and rocky pools. Specimens are caught by line fishing though instances of their
capture by gill nets are not rare. It is considered as a food fish.

Distribution: Brahmaputra and Barak river system, Ganga river and its tributaries;
Chao Phrya and Mekong basins (Laos); and possibly also the Pattani river (Malay
Peninsula).

2. *Bagarius yerellii* (Sykes)

Characteristics: Skin above neural spine anterior and posterior to adipose fin
never forming distinct ridges, circular eyes. Pelvic fin inserted well behind last dorsal
finray; pectoral fin rays 9-12, skin anterior and posterior to adipose fin not forming ridges or bumps, faint light and dark colour patches on body.

Distribution: India: Ganga and Brahmaputra and Chindwin basins, Bangladesh, Myanmar, Thailand, Borneo, Java.

3. *Conta conta* (Hamilton-Buchanan)

Characteristics: Body elongate and subcylindrical, not much depressed dorsally nor flattened ventrally. An elongate adhesive pad on ventral surface of body distinct and well-developed, formed by plaited longitudinal muscular skin folds. Head small, oval shaped and compressed. Eye small, subcutaneous, dorsolateral in position. Mouth small and ventral; teeth villiform on jaws. Dorsal fin short, with a strong spine (strongly serrated on both edges) spine and 6 soft rays; pelvic fin rays 5. Caudal fin deeply forked, with both lobes greatly produced. Head and body tuberculated with the exception of middle of abdominal region.

Fin formula: D I 5-6; A ii-iii 7; P I 6; V i 5

Fishery: This rather rare catfish attains a length of 7.8 cm; of no interest to fisheries.

It is considered as ornamental fish.

Distribution: India: base of the Himalayas in north Bengal, Assam, Meghalaya, and Terrai (Uttar Pradesh); and Bangladesh.

Inhabits rocky streams at the base of hills.

4. *Erethistes pussilus* (Mullar and Troschel)

Characteristics: Body short, flattened ventrally to pelvic fin base; dorsal and lateral surfaces granulated, but ventral surface with short spines directed backwards. Head large and broad, with the superficial bones granulated and form strong armature; scapular and cubito-humeral processes pronounced. Eyes small and subcutaneous dorsolateral in position. Mouth small and ventral; teeth minute on both jaws, embedded in tissue; palate edentulous. Barbels four pairs, all annulated with black rings. Gill-opening narrow; gill-membranes confluent with isthmus. No adhesive pad on thorax. Dorsal fin with a strong spine and 6 soft rays; adipose fin fairly short. Anal fin with 11 rays. Pectoral fins more or less horizontally placed; pectoral spine strongly serrated along both edges, the indentations along outer edge arranged in form of somewhat divergent spines. Pectoral fin rays 6, inserted below
dorsal fin. Caudal fin forked to emarginated. Lateral line complete, often with tubercules. Airbladder divided into two globular and lateral lobes, connected by a median, transverse tube; both lobes in contact with skin externally, and are protected by cubital and scapular processes. Branchiostegal rays 6.

Fin formula: D I 6; Ai iii 8; P I 5-6 V i 5

Fishery: This catfish is a small catfish rarely exceeding 5 cm total length and is of no interest to fisheries. It is primarily a hill-stream fish which is often washed to the plains during flood and is now thriving well. It is considered as a ornamental fish.

Distribution: India: Ganga and Brahmaputra drainges; Bangladesh; and Burma: Tenasserim. Inhabits hillstreams.

5. _Erethistoides montana montona_ (Hora)

Characteristics: Head and body greatly depressed, covered with small backwardly-directed spines on dorsal surface. Head small; snout projecting like a hood in front of mouth. Eyes small, subcutaneous, not visible from underside of head. Nostrils close to each other, separated by a flap-bearing barbel. Mouth distinctly inferirp; teeth villiform in bands on jaws, teeth in upper jaw visible externally; palate edentulous. Barbels four pairs (nasal, maxillary and two pairs mandibular). Gill-openings narrow; gill membranes confluent with isthmus. No thoracic adhesive apparatus. Rayed dorsal fin with a strong spine and 5 soft rays; adipose fin short and low. Paired fins horizontally placed; pectoral fin with a strong serrated spine, the denticles along the outer edge antrose (directed towards the base) in proximal half while along the distal half retrose (directed towards the base) in proximal half while along the distal half retrose (directed towards the tip); pelvic finrays 6. Caudal fin emarginated. Airbladder divided into two globular lateral lobes but free. Head and anterior part of body provided with strong armature of bones, all of which are thick, strong and markedly denticulate. Branchiostegal rays 6.

Fin formula: DI 5A ii 7; PI 6; Vi 5

Fishery: The catfish attains a length of 4.8cm; and is of no interest to fisheries. It is considered as a ornamental fish.
Distribution: Eastern Himalaya :Tripura, Assam and Darjeeling (West Bengal)

6. Euchiloglanis hodgarii (Hora)

Characteristics: Body elongate, flattened ventrally up to base of pelvic fins. Head small and depressed; snout broadly rounded. Eyes small, subcutaneous, not visible from underside of head. Nostrils close to each other, separated by a flap-bearing nasal barbel. Gill-opening narrow, restricted to dorsal side of head; gill-membranes free from each other, but confluent with isthmus. No thoracic adhesive apparatus. Mouth ventral; lips thick, fleshy and papillated, the fold of lower lip broadly interrupted in middle; teeth small and pointed, on upper jaw form a band which is not produced backwards at sides; palate edentulous. Barbels four pairs; maxillary pair with broad bases, their ventral surface of outer halves with striated pads of adhesive skin. Fins without spines; rayed dorsal fin with 7 soft rays; adipose fin low and long. Anal fin short. Paired fins broad, rounded and horizontally placed; pectoral fin with 13-17 branched rays; pelvic fin rays 6; skin on ventral surface of first ray of paired fins corrugated in pinnate folds for purpose of adhesion. Caudal fin obliquely truncate or somewhat rounded. Skin soft, minutely papillated on ventral surface.

Fin formula: D ii 5 A ii 6; P i 16-17; V i 5

Fishery: This catfish attains a length of about 6.5 cm; of no interest to fisheries. It is considered as an ornamental fish.

Distribution: Indian: rivers below Darjeeling (North Bengal), Abor Hills (Assam) and Kali river (Uttar Pradesh); Bangladesh. Inhibits torrential streams.

7. Exostoma barakenesis (Vishawanath and Joyshree)

Characteristics: Pectoral fin with 10 branched rays; caudal fin with 15-16 branched rays; anal fin origin at vertical level of 1/3 of adipose fin length; adipose fin considerably separated from caudal fin.

Distribution: India: iyei, tributary of Barak river in Manipur (Brahmaputra basin).

8. Exostoma labiatum (McClelland)
Characteristics: Body elongate and flattened ventrally, its depth about 5.4 times in standard length. Mouth inferior; teeth in two distinct patches on upper jaw. Barbels four pairs; maxillary barbells extend posteriorly to base of pectoral fin. Gill-opening moderate, extending below to opposite base of pectoral fins. Caudal fin deeply emerginate. Ventral surface of head behind mouth, and sides of head sparsely and minutely papillated.

Fin formula: D i 6; A i 5; P i 11-12; V i 5

Distribution: India: North Bengal and Meghalaya.

9. *Gagata cenia* (Hamilton-Buchanan)

Characteristics: Head compressed, its length 3.6 to 4.5 times in standard length; snout prominent, about as long as eye diameter; medium longitudinal groove on head extends to base of occipital process (supraoccipital spine). Mouth small, teeth small and villiform on jaws. Barbels four pairs; nasal barbells minute, likely to be overlooked; maxillary barbells with stiff base.

Fin formula: D I 6;ii-iii 10-14;P I 7-9; V i 5

Fishery: This catfish grows size of 15 cm standard length, fairly common in all the rivers of northern India, particularly in the Jamuna and Ganga basin, also in Assam. This species is considered as a wholesome food.

Distribution: Pakistan: Indus plain; India: Punjab, Delhi, Uttar Pradesh, Bihar, West Bengal, Assam and Orissa; Bangladesh, Nepal; and Burma: Chinwin drainage. Inhabits rivers, also tidal rivers.

10. *Gagata gagata* (Hamilton-Buchanan)

Characteristics: Medium sized, a stoutly built species. Body laterally compressed, more so posteriorly. Head broadly pointed in front, its length 3.6 to 3.9 times in standard length; snout prominent and globular, extends slightly beyond mouth; median longitudinal groove on head extends (with slight variations) to end of occipital process. Mouth small; villiform in patches on jaws. Barbels four pair small and thin; maxillary barbells with stiff long bases, rarely exceed head length; mandibular barbells with slightly swollen bases, placed in transverse row behind lower tip, about half length of maxillary barbels. Dorsal spine long finely serrated along distal-third anterior edge.
Fin formula: D I 6; A iii-iv 10-12; P I 9; V i 5

Fishery: It attains a maximum length of 30.5 cm total length, of no interest to fisheries. It is considered as a ornamental fish.

Distribution: India: Ganga and Brahmaputra river systems; Bangladesh: Padma river system; and Burma: Irrawaddy river system exist in fresh and tidal waters.

11. **Gagata gasawyuh** (Roberts and Ferraris)


   Distribution: India: Chinwin basin in Manipur, Myanmar.

12. **Gogangra viridescens** (Hamilton)


   Fishery: It is considered as a ornamental fish.

   Distribution: India: Ganga and Brahmaputra river systems.

   Distribution: India: Brahmaputra river near Jorhat, Assam.

13. **Glyptostrnum maculatum** (Regan)

   Characteristics: Body elongate, its depth 3.6 to 5.1 times in standard length. Mouth inferior; teeth villiform in bands on jaws. Barbels four pairs; maxillary barbells extend posteriorly to beyond pectoral fin base. Rayed dorsal fin inserted nearer adipose fin than to snout tip; adipose fin long and low, not confluent with caudal fin. Pectoral fins low, extending 1/2 to 3/8ths of distance of pelvic fins. Caudal fin truncate; least height of caudal peduncle about 2 times its length.
Fin formula: D i 6 ; A I 5 ; P i 12 ; V i 5

Fishery: This species attains a length of about 25 cm; of no interest to fisheries. It is considered as a ornamental fish.

Distribution: India: Brahmaputra drainage in Sikkim; and Tibet: Lhasa and Gyang-tse.

14. *Glyptothorax cavia* (Hamilton-Buchanan)

   Characteristics: Body elongate, its depth 5.9 to 6.6 times in standard length. Head depressed, longer than broad; occipital process not reaching basal bone of dorsal fin. Mouth inferior; lips papillated. Barbels four pairs; maxillary barbells extend posteriorly to slightly beyond pectoral fin base. Adhesive thoracic apparatus longer than broad encircling a deep central pit. Dorsal fin inserted equidistant between snout tip and adipose fin; dorsal spine strong and smooth.

   Fin formula: D I 6; A ii 9-10; P I 9; V i 5

Fishery: This catfish attains a length of 16.5 cm and is of minor interest to fisheries in the Indian region. It is considered as an ornamental and food fish.

Distribution: Pakistan; India: north Bengal and Assam; Nepal; Bangladesh; and Burma.

15. *Glyptothorax botius* (Hamilton)

   Characteristics: Body with dark saddles, snout rounded laterally. Body with dark saddles; more rounded snout when viewed laterally; thoracic adhesive apparatus with broader folds of skin; skin tuberculated

Distribution: India: Ganga and Brahmaputra basins in North and North East India.

16. *Glyptothorax cavia* (Hamilton)

   Characteristics: Adhesive apparatus with deep pit, lateral extent of lower jaw tooth band.

   Distribution: India: North west, North and North East (All Ganga and Brahmaputra basin), Bangladesh, Nepal.

17. *Glyptothorax chindwinica* (Vishwanath and Linthoingambi)

   Characteristics: Adhesive apparatus with shallow pit, lateral extent of lower jaw tooth band 47.8-49.0% head width.
Distribution: India: Irl, Lokcho and Thoubal rivers of Manipur (Chindwin basin)

18. *Glyptothorax granules* (Vishwanath and Linthoingambi)
Characteristics: Skin granulated, head depth at occiput 60.2-61.0% HL
Distribution: India: Chindwin basin in Manipur.

19. *Glyptothorax manipurensis* (Menon)
Characteristics: Skin smooth, head depth at occiput 66.0-72.3% HL.
Distribution: India: Barak basin in Manipur.

20. *Glyptothorax ngapang* (Vishwanath and Linthoingambi)
Characteristics: Dorsal spine serrated distally and posteriorly, adhesive apparatus with elongated median depression.
Distribution: India: Chindwin basin in Manipur.

21. *Glyptothorax platypogonoides*
Characteristics: Skin with prominent tubercles, arranged in regular longitudinal rows; pectoral fins shorter than head, not reaching pelvic fins; anal fin inserted opposite to origin of adipose fin.
Fishery: This catfish attains a length of 13 cm SL, is not definite in the Indian region.
Fin formula: D I 6-7; A iii-iv 9; P I 8-9; V i 5
Distribution: India: the Brahmaputra and Barak river system, Manipur Valley; Burma; Thailand; Sumatra; and Western Borneo

22. *Glyptothorax striatus* (Mc Clelland)
Characteristics: Occipital process distinctly separated from nasal bone of dorsal bone.
Fin formula: D I 6; A ii 9; P I 11; V i 5
Fishery: This catfish attains a length of 21.3 cm; of minor interest to fisheries. It is considered as a ornamental fish.
Distribution: India: Khasi and Garo Hills (Meghalaya); Brahmaputra river, and Sikkim.
23. *Glyptothorax telchitta* (Hamilton)

Characteristics: Thoracic apparatus with narrow folds of skin; more triangular snout when viewed laterally; body with no dark saddles.

Distribution: India: Ganga and Brahmaputra basins in North East India.

24. *Glyptothorax ventrolineatus* (Vishwanath and Linthoingambi)

Characteristics: Dorsal adipose and caudal fin bases are plain, creamish yellow band on mid ventral line. Dorsal adipose and caudal fin base black no band on mid ventral line.

Distribution: India: Chindwin basin in Manipur.

25. *Glyptosternon maculatum* (Regan)

Characteristics: Post labial groove interrupted. Gill openings into ventral; homodont dentition.

Distribution: India: Arunachal Pradesh, Brahmaputra river

26. *Hora hora* (Hamilton-Buchanan)

Characteristics: Body moderately elongate; ventral surface flattened. Mouth inferior; teeth villiform on jaws. Barbels four pairs, all annulated. Occipital process separated from nasal bone of dorsal fin by an interspace. Cleithral process prominent, its length 1.6 to 1.8 times interdistance between its origin and base of pelvic fin. Dorsal spine and strong serrated adipose fin base 1.3 to 1.4 times in base of rayed dorsal fin, extends nearly one eye - diameter behind vertical from posteriorly to pelvic fin, its length equal to or longer than head length.

Fin formula: D I 6; A iv 7-8; P I 7; V i 5

Fishery: This hill stream fishes attains a length of about 2.5cm and is of no interest to fisheries. It is considered as a ornamental fish.

Distribution: India: Uttar Pradesh, Bihar, north Bengal, Assam and Orissa; Nepal; and Burma.
27. *Hora jerdoni* (Day)

Characteristics: Pectoral spine very long, extends beyond middle of pelvic fin length of cleithral process about 1.25 times interdistance between its origin and pelvic fin base; occipital process reaches basal bone of dorsal fin.

Fin formula: D I 5; A iv – v 5-7; P I 4-5; V i 5

Fishery: This catfish attains a length of 3.7 cm; of no interest to fisheries.

Distribution: India: Jarahi and Kosi rivers (Bihar), Teesta river (north-Bengal), Assam and Uttar Pradesh; Bangladesh: Sylhet.

28. *Myersglanis jayarami* (Vishwanath and Kosygin)

Characteristics: Pectoral fin with 10 branched rays, caudal fin with 15-16 branched rays; anal fin origin equidistant from pelvic fin origin & caudal fin base; adipose fin confluent with caudal fin.

Distribution: India: Laniya river at Jessami, Nagaland-Manipur border, Manipur (Chindwin basin).

29. *Pareuchiloglanis kamaengensis* (Jayaram)

Characteristics: Caudal fin margin straight and with a black band at base; pelvic fin origin at ventricle level of behind anterior base of dorsal fin.

Distribution: India: Arunachal Pradesh.

30. *Parachiloglanis hodgarti* (Hora)

Characteristics: Caudal fin emarginated and with a round black spot at base; pelvic fin origin at vertical level of anterior base of dorsal fin.

Distribution: India: Assam, Darjeeling, West Bengal, Arunachal Pradesh, Bangladesh, Nepal.

31. *Pesudecheneis sulcatus* (Mc Clelland)

Characteristics: Body elongate, flattened ventrally to pelvic fins. Head short, provided with a broad and oval thoracic apparatus. Mouth small and inferior; teeth
villiform in bands on jaws. Barbels four pairs maxillary barbells broad-based. Dorsal spine weak and roughened on its posterior edge.

Fin formula: D I 6;A ii-iv 7-9; P I 13; V i 5

Fishery: This catfish attains a length of 20 cm; of no interest to fisheries. It is considered as a ornamental fish.

Distribution: India: Doon valley (U.P), north Bengal and the Khasi Hills, Brahmaputra river, (Meghalaya); Nepal; and Bangladesh.

32. *Pseudocheneis sirenica* (Vishwanath and Darshan)

Characteristics: Longest ray of pelvic fin reaching anal origin or beyond. Prominent bony spur on antero-dorsal surface of first dorsal fin pterygiophore present.


33. *Pseudocheneis sulcata* (McClelland)

Characteristics: Body spur in the first dorsal fin pterygiophore absent. Prominent bony spur on anterodorsal surface of first dorsal fin pterygiophore present.

Distribution: India: Assam, West Bengal, Meghalaya, Nepal, Arunachal Pradesh, Bangladesh.

34. *Nangra assamensis* (Sen and Biswas)

Characteristics: Dorsal fin branched rays 8, nasal barbel as long as head or more.

Distribution: India: Brahmaputra river near Jorhat, Assam

35. *Nangra nangra* (Hamilton)

Characteristics: Dorsal fin branched rays 8, nasal barbell as long as head or more.

Distribution: India: River of the North and the North East, Bangladesh, Nepal, Pakistan
36. *Sisor rabdophorus* (Hamilton-Buchanan)

Characteristics - Body elongate with a long tapering tail like a whip, anteriorly depressed and posteriorly compressed. Eyes very small, located dorsally. Mouth small and inferior, lips thick & freshly, papillated. Jaws and palate devoid of teeth. Barbles 6 pairs, maxillary one pair & mandibular 5 pairs, short arising from lower labial fold. Gill opening narrow. Dorsal fin with a weak, anteriorly serrated spine and six soft rays, adipose fin in the form of a spine. Pectoral fins horizontal with a flattened serrated spine and 6 soft rays; pelvic fin rays Caudal fin truncated, its upper ray elongated & filamentous (the upper ray prolonged in a very long filament). A series of body plates constitute basal bone of dorsal fin to caudal fin base; 5 plates on either side of dorsal fin and 6 elevated scale like plates along median line behind dorsal fin, the last plate in form of spine. Lateral line with a series of small rough bony plates. Branchiostegal rays.

Fishery: This catfish attains a length of 18cm standard length and is reported to be eaten by the poorer classes in India. It is considered as an ornamental fish.

Distribution: - The lower Ganges river drainage in West Bengal state, Brahmaputra river drainage, Assam

37. *Sisor barakenesis* (Vishwanath and Darshan)

Characteristics: Body with four series of autogenous plates, pectoral spine with 15 – 20 serrae on posterior edge, lateral line ossicles 77-79. Body elongate with a long tapering tail like a whip, anteriorly depressed and posteriorly compressed. Eyes very small, located dorsally. Mouth small and inferior, lips thick & freshly, papillated.

Fishery: This catfish attains a length of 18cm standard length and is reported to be eaten by the poorer classes in India. It is considered as an ornamental fish.

Distribution: - India: Manipur-Barak river, jirri, Manipur, Brahmaputra basin.

38. *Sisor chennah* (Hamilton)

Characteristics: Body with three series of autogenous plates, the pectoral spine with 12-22 serrae on posterior edge, lateral line ossicles 66-70. Body elongate
with a long tapering tail like a whip, anteriorly depressed and posteriorly compressed. Eyes very small, located dorsally. Mouth small and inferior, lips thick and freshly, papillated.

Fishery: This catfish attains a length of 20cm standard length and is reported to be eaten by the poorer classes in India. It is considered as a ornamental fish.

Distribution: - India: Manipur-Barak river, jirri area, Ganga and Brahmaputra river system, Bangladesh, Pakistan
REFERENCE


Ng H. H. 2005b. Glyptothorax botius (Hamilton), a valid species of catfish (Teleostei: Sisoridae) from northeast India, with notes on the identity of G. telchitta (Hamilton, 1822) Zootaxa. 930: 1-19


Fishes of Sisoridae family are available in the Asia region. They are bottom dwelling catfishes. This family has its greatest diversity in the Indian sub continent. It is the largest most diverse group. Body whip like ;adipose dorsal fin rudimentary, consisting of a small spine; upper caudal fin rays considerably elongate and filamentous ,equal to about length to about length of the body ;jaws and palate edentate. There are about 38 species found in the Brahmaputra basin. In the present studies the details of their meristic characters and their distribution have been shown.

Key words: Sisoridae, Brahmaputra basin and Barak basin river system, Fish taxonomy, freshwater fish diversity.

INTRODUCTION

Catfishes are a species rich and exceptionally diverse group of fishes ranking second or third among vertebrates. The catalog of fishes (Eschmeyer et.al 2006) databases treats 2,855 sp. of catfishes as valid. About 1 in 4 valid sp. of freshwater fishes. The river Brahmaputra in the Northeast India (Lat., 21°57’N-29°30’N and Long, 89°46’E-97°30’E) flowing through the state of Assam and Arunachal Pradesh with its numerous perennial tributaries hill streams and connected beels and reservoirs affords lucrative aspects of fishery of various kinds of freshwater
ichthyospecies (Goswami et. al. 2012). *Sisor* has a very restricted distribution being confined to a few tributaries of the main rivers of north India and also found northeast India, mainly at the foot of the hills where the current may be fast not too deep & bottom is sandy. It tries to find a sheltered place where the water current is rather slow. It is essentially a bottom dweller and invariably keeps in sandy bottom juveniles are found hiding below the stones on sandy bottom. It rises to the surface only when absolutely necessary. The catfishes family Sisoridae is one of the largest families of Asian catfishes comprising about 170 species in 22 genera (Ferraris, 2007). Its members are found mostly in hill streams and upper reaches of rivers spanning the entire southern arc of the Asian continent from Euphrate rivers drainage of eastern Turkey to eastern and southern continental Asia and greater Sunda Islands. It has been hypothesized that some south Asian catfishes previously assigned to the Sisoridae are more closely related to the South America aspredinids, with these being reassigned to the family Eretistidae. However this hypothesis has been demonstrated to be very weakly supported by variable evidence Feeraris (2007). Recent phylogenetic studies based on molecular & morphological data have corroborated the exclusion of the Aspredinidae from the Sisoridae. The super family group of catfishes that includes the Akysidae, Amblylipitidae and Sisoridae and indicated that the erithistids form a natural group that is deeply nested within the Sisoridae. Recent taxonomy has reflected this relationships, with members of the Eretistidae being reassigned to the Sisoridae (Ferraris, 2007). We have shown the occurrence of different species of freshwater Sisorids (Deka & Goswami et. al 2013).

**MATERIALS AND METHODS**

Fishes were identified after Feeraris, 2007, Talwar and Jhingran, 1991 and is further confirmed after Eschmeyer, 2006 and Fish base .org. (2010). Species were studied in detail with reference to their taxonomy and distribution. Taxonomic analysis and distribution etc. are followed from Goswami et. al, 2012.
RESULTS

In the present studies 38 species of Sisoridae have been studied. The species were collected and their distribution, taxonomic characteristic are evaluated. The fin formula of each species is shown in Table-1. It may be identified that 2 species Sisor rabdophorus ,Sisor chennuah are abundantly available in the Brahmaputra river system where as Sisor barakenesis is available in the Barak river system Table-2.
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<th>Order</th>
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<td>Actinopterygii</td>
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<td>Distributed in the Mekong, chao, phraya, ganges and Brahmputa basin.</td>
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<td>Siluriformes</td>
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<td>D I6; Aii-iii7; P I6; Vi5</td>
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<td>Siluriformes</td>
<td>Sisoridae</td>
<td>Brahmaputra river drainage in northeastern India (Arunachal Pradesh and Meghalaya)</td>
<td>D I6; Ai 5; P i11-12; Vi5</td>
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<td>Gagata centa</td>
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<td>Sisoridae</td>
<td>Throughout the Mahanadi, Indus, Ganges and Brahmaputra basin</td>
<td>D I6, ii-iii 10-14; P I 7-9; Vi 5</td>
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<td>Gagata gagata</td>
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<td>Sisoridae</td>
<td>Ganges and Brahmaputra river drainages of Nepal, India, Bangladesh</td>
<td>D I6; A iii-iv 10-12; P I9; V I 5</td>
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<td>Gagata gasawyuh</td>
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<td>India Chinwin basin in Manipur, Myanmar</td>
<td>D I6; A iii-iv 10-12; P I9; V I 5</td>
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<td>Gogangra viridescens</td>
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<td>Sisoridae</td>
<td>India Brahmaputra river near Jorhat, Assam</td>
<td>D I6; A iii-iv 10-12; P I9; V I 5</td>
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<td>D 16 A iv 7-8; p 17;V 15</td>
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<td>D 15; A iv-v 5-7; P I 4-5; V 5</td>
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<td>India: Assam, Drjeeling West Bengal, Arunachal Pradesh, Bangladesh, Nepal</td>
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<td>Pesudcheneis sulcatus</td>
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<td>Actinopterygii</td>
<td>Siluriformes</td>
<td>Sisoridae</td>
<td>India: Doon valley (u.p), North Bengal and the Khasi hills, Brahmaputra river, Nepal and Bangladesh</td>
<td>D 16; A ii-iv 7-9; P I 13; V 15</td>
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<td>Pseudochenis sirentica</td>
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<td>Actinopterygii</td>
<td>Siluriformes</td>
<td>Sisoridae</td>
<td>India: Siren river, Arunachal Pradesh, Brahmaputra basin</td>
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<td>Pseudochenesis sulcatus</td>
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<td>Siluriformes</td>
<td>Sisoridae</td>
<td>India: Assam, West Bengal, Meghalaya, Arunachal Pradesh, Bangladesh</td>
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<td>Nangra assamensis</td>
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<td>Siluriformes</td>
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<td>India: River of North and the North East, Bangladesh, Nepal, Pakistan</td>
<td>D 18 A ii-iv 7-9; P I 13; V 15</td>
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<td>Sisor rabdophorus</td>
<td>Chordata</td>
<td>Actinopterygii</td>
<td>Siluriformes</td>
<td>Sisoridae</td>
<td>The lower Ganges river drainage in west Bengal State, Brahmaputra river drainage, Assam</td>
<td>D 16 A ii 4-6; P 15 V I 5-6</td>
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<td>Sisor barakenesis</td>
<td>Chordata</td>
<td>Actinopterygii</td>
<td>Siluriformes</td>
<td>Sisoridae</td>
<td>India Manipur – Borak river, Jirri, Brahmaputra basin</td>
<td>D 16 A ii 4-6; P 15 V I 11-12</td>
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<td>Sisor chennuah</td>
<td>Chordata</td>
<td>Actinopterygii</td>
<td>Siluriformes</td>
<td>Sisoridae</td>
<td>India: Manipur – Barak river, Jirri area, Ganga and Brahmaputra river system, Bangladesh, Pakistan</td>
<td>D 16 A ii 4-6; P 15 V I 11-12</td>
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Table 2: The differences of three species of *Sisor* from Brahmaputra and Barak

<table>
<thead>
<tr>
<th>Parameters</th>
<th><em>Sisor rabdophorus</em></th>
<th><em>Sisor barakenesis</em></th>
<th><em>Sisor chennuah</em></th>
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<tr>
<td>Anal fin</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>Dorsal fin</td>
<td>6</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Caudal fin</td>
<td>10</td>
<td>10</td>
<td>12</td>
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<tr>
<td>Pelvic fin</td>
<td>7</td>
<td>8</td>
<td>7</td>
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<tr>
<td>Barbels</td>
<td>3 pairs</td>
<td>7 pairs</td>
<td>4 pairs</td>
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<tr>
<td>Nuchal plate length</td>
<td>0.3-1</td>
<td>0.5-1</td>
<td>0.4-1.2</td>
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<tr>
<td>Nuchal plate breadth</td>
<td>0.8-1.9</td>
<td>0.5-1.3</td>
<td>0.7-2</td>
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<tr>
<td>Length of 1st bony plates</td>
<td>0.3-1.7</td>
<td>0.3-1.4</td>
<td>1-1.5</td>
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<tr>
<td>Length of 2nd bony plates</td>
<td>2.1-3.3</td>
<td>0.9-2</td>
<td>1.9-2.2</td>
</tr>
<tr>
<td>Breadth of 1st bony plate</td>
<td>0.4-1.4</td>
<td>0.5-1.3</td>
<td>0.1-0.5</td>
</tr>
<tr>
<td>Breadth of 2nd bony plate</td>
<td>0.5-0.9</td>
<td>0.4-1</td>
<td>0.3-0.5</td>
</tr>
<tr>
<td>No of 1st bony Plate series</td>
<td>5 plates</td>
<td>5 plates</td>
<td>4 plates</td>
</tr>
<tr>
<td>No (2nd series of bony Plate series)</td>
<td>7 plates</td>
<td>9 plates</td>
<td>7 plates</td>
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<tr>
<td>Tail length</td>
<td>10-32.7</td>
<td>7-25</td>
<td>8.5-23</td>
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<td>No of tail</td>
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<td>1</td>
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DISCUSSION

The species of Sisor are collected from both the Brahmaputra (Manas 26°13′01″N 90°37′59″E / 26.217°N 90.633°E, Dhubri Lat.,25°02 N and Long89°58′
E ,) and Barak (Silchar Lat.,24°49′ N and Long92°48′ E ) river system flowing through the state river and the three species were observed according to their head length ,snout length, pre-orbital length post-orbital length ,body depth, Pre-pelvic distance, Pre-dorsal length and they have differences in these parameters. The species of Sisor are collected from Manas river of Brahmaputa river drainage and the three species were observed according to their head length, snout length, pre-orbital length ,post-orbital length ,body depth, Pre-pelvic distance, Pre-dorsal length and they have differences in these parameters. The three species are not edible fishes. Only poor people take this as a part of their food. The three species have very distinctive feature of nuchal plate ,anterior ridge of pectoral spine and on the basis of this parameters these three species are distinguished. Their adipose fin is transformed into small spine and they are brackish in colour. This catfish attains a length of 18 cm standard length. Teeth absent in these three species .Although there is insufficient information on the population size (and trends) and the biology of this species, data from field surveys indicates that this species is still relatively common coupled with the fact that this species is not eaten and is only collected for the ornamental purposes at low harvesting .Thus these species are assessed here as Least concern. The specificity of these three species is that they have mostly designed head structure, and it bear a tail which is started from the caudal fin and it is not continuous of vertebral column. From caudal fin along with a other fin rays it is the 12 fin ray which is elongated and form a tail like structure. The different shapes of the nuchal plate represent sexual dimorphism ,this is evidently not the case as the shape of the nuchal plate is rather consistent for the members of the same population ,and does not differ significantly between males and females of the same population either. Lateral line complete with a series of bony plates. Undivided ray of dorsal ossified ,but not spiny. Pectoral spine along serrated along both edges. Generally colour dirty brown and tinged with grey.
ACKNOWLEDGMENT

Thanks are given to the Fisher folk who have helped in collecting the species.

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