

# Fish Species Diversity in the Areas of National Parks and Wildlife Sanctuaries in the five Eastern Provinces of Thailand

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## บทคัดย่อ

จากการศึกษาความหลากหลายของชนิดปลาในพื้นที่ป่ารอยต่อ 5 จังหวัดภาคตะวันออกเฉียงเหนือของประเทศไทย โดยทำการเก็บรวบรวมตัวอย่างระหว่าง วันที่ 17 เมษายน 2540 ถึง 10 พฤษภาคม 2540 พบปลาทั้งสิ้นจำนวน 24 วงศ์ 56 สกุล รวม 92 ชนิด ดังนี้ วงศ์ Akysidae พบ 1 ชนิด, Amblycipitidae พบ 1 ชนิด, Anabantidae พบ 1 ชนิด, Bagridae พบ 4 ชนิด, Balitolidae พบ 13 ชนิด, Belonidae พบ 1 ชนิด, Belontiidae พบ 4 ชนิด, Chandidae พบ 1 ชนิด, Channidae พบ 3 ชนิด, Cichlidae พบ 1 ชนิด, Clariidae พบ 2 ชนิด, Cobitidae พบ 11 ชนิด, Cyprinidae พบ 29 ชนิด, Eleotridae พบ 1 ชนิด, Gobiidae พบ 1 ชนิด, Hemiramphidae พบ 1 ชนิด, Mastacembelidae พบ 5 ชนิด, Nandidae พบ 3 ชนิด, Notopteridae พบ 1 ชนิด, Siluridae พบ 2 ชนิด, Sisoridaeพบ 3 ชนิด, Synbranchidae พบ 1 ชนิด, Syngnathidae พบ 1 ชนิด และ Tetraodontidae พบ 1 ชนิด

นอกจากนี้จากการศึกษาได้พบ *Barbucca diabolica* และ *Serpenticobitis zonata* ในวงศ์ Cobitidae จากเขตรักษาพันธุ์สัตว์ป่าเขาสอยดาว และปลาทั้ง 2 ชนิดนี้ได้ถูกรายงานการพบเป็นครั้งแรกในประเทศไทย

## ABSTRACT

The study on fish species diversity in the areas of the National Parks and Wildlife Sanctuaries which are located in the five eastern provinces of Thailand and it were performed during 17<sup>th</sup> of April, 1997 to 10<sup>th</sup> of May, 1997. There were 92 species, 56 genera and/ or 24 families. These fishes belong to the following families: Akysidae (1), Amblycipitidae (1), Anabantidae (1), Bagridae (4), Balitolidae (13), Belonidae (1), Belontiidae(4), Chandidae (1), Channidae (3), Cichlidae (1), Clariidae (2), Cobitidae (11), Cyprinidae (29), Eleotridae (1), Gobiidae (1), Hemiramphidae (1), Mastacembelidae (5), Nandidae (3), Notopteridae (1), Siluridae (2), Sisoridae(3), Synbranchidae (1), Syngnathidae (1) and Tetraodontidae (1). The *Barbucca diabolica* and *Serpenticobitis zonata* (Cobitidae) collected from this study were the first record of fishes found in Thailand.

**Key words:** Species diversity, the areas of National Parks and Wildlife Sanctuaries in the five Eastern Provinces of Thailand.

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## INTRODUCTION

The areas of National Parks and Wildlife Sanctuaries in the five eastern provinces of Thailand, which are consisted of Chanthaburi, Rayong, Chonburi, Chacheangsao and Srakaew province. These areas include Khao Kitchakut National park, Khao Chamao- Khao Wong National park, Khao Soidao Wildlife Sanctuary and Khao Aang Rue Nai Wildlife Sanctuary. Since these areas have never been investigated completely before it is, then, a challenging work for us to have a chance to do so

The information on species diversity of fishes in the eastern part of Thailand are poorly know. The study on species diversity of fishes in the areas of National Parks and Wildlife Sanctuaries in the five eastern provinces of Thailand, was performed for the following purposes: (1) to study on species diversity of fishes and (2) all information obtained from this study is hoped to be useful for aquatic resources management of this area in the future.

## MATERIAL AND METHODS

Specimens were collected from 4 sampling areas mainly by electro-fishing during April 17, 1997 to May 10, 1997. They, then, were preserved in 10 % formalin solution. Taxonomic studies, count and measurement are based on Hubb and Lagler (1947). Measurement were made by using Vernia caliper. Classification and identification follow those texts written by Fowler (1934 and 1935), Smith (1945), Nelson (1994), Rainboth (1996), Kottelat (1998, 2001) etc. All specimens are deposited in Kasetsart University Museum of Fisheries, Thailand (KUMF)

## RESULT AND DISCUSSION

The study on species diversity of fishes in the areas of National Parks and Wildlife Sanctuaries in the five eastern provinces of Thailand and there were 92 species, 56 genera and/ or 24 families of fishes found (Table 1).

Table 1 Fish species found from sampling areas of the National Parks and Wildlife Sanctuaries in the five eastern provinces of Thailand

Family / Scientific name	English common name	1	2	3	4
1. Family Notopteridae					
<i>Notopterus notopterus</i> (Pallas, 1780)	Gray feather - back	+	+	+	-
2. Family Cyprinidae					
<i>Chela laubuca</i> (Hamilton, 1822)	Indian glass barb	-	+	+	+
<i>Oxygaster anomalura</i> van Hasselt, 1823	-	-	+	-	-
<i>Oxygaster maculicauda</i> (Smith, 1934)	-	-	-	-	+
<i>Oxygaster siamensis</i> (Günther, 1868)	-	-	-	+	-
<i>Cirrhinus siamensis</i> (Sauvage, 1881)	-	-	-	-	+

Family / Scientific name	English common name	1	2	3	4
<i>Cyclocheilichthys apogon</i> (Valenciennes, 1842)	Indian river barb	-	+	-	-
<i>Cyclocheilichthys repasson</i> (Bleeker, 1853)	Barb	-	+	-	+
<i>Garra cambodgiensis</i> (Tirant, 1884)	Stone lapping fish	+	+	+	-
<i>Hampala macrolepidota</i> Kuhl & van Hasselt, 1823	Transverse-bar barb	-	+	+	+
<i>Labiobarbus spilopleura</i> (Smith, 1934)	Barb	-	-	-	+
<i>Mystacoleucus marginatus</i> (Valenciennes, 1842)	Barb	-	+	+	+
<i>Oreichthys parvus</i> Smith, 1933	-	+	+	+	+
<i>Osteochilus hasselti</i> (Valencienne, 1842)	-	+	+	-	+
<i>Osteochilus lini</i> Fowler, 1935	Hard lipped barb	+	-	-	+
<i>Poropuntius deauratus</i> (Valenciennes, 1842)	Torrent carp	+	+	+	+
<i>Puntius aurotaeniatus</i> (Smith, 1931)	Barb	+	-	-	+
<i>Puntius binotatus</i> (Valenciennes, 1842)	Long – snouted barb	+	+	+	+
<i>Puntius brevis</i> (Bleeker, 1860)	Golden – little barb	+	+	+	+
<i>Puntius ophoides</i> (Valenciennes, 1842)	Red – cheek barb	-	+	+	+
<i>Puntius partipentazona</i> (Fowler, 1934)	Sumatran tiger barb	-	+	+	+
<i>Tor soro</i> (Valenciennes, 1842)	Barb	+	+	-	-
<i>Brachydanio albolineata</i> (Blyth, 1860)	Blue danio	-	+	+	+
<i>Esomus longimanus</i> (Lunel, 1881)	Minow, Barb	-	+	+	+
<i>Esomus mettalicus</i> Ahl, 1924	Minow, Barb	+	-	+	+
<i>Opsarius koratensis</i> (Smith, 1931)	-	+	-	+	-
<i>Rasbora borapetensis</i> Smith, 1934	Minow	+	+	+	+
<i>Rasbora myersi</i> Brittan, 1954	Minow	+	+	+	+
<i>Rasbora sumatrana</i> (Bleeker, 1852)	Minow	+	+	+	+
<i>Rasbora trilineata</i> Steindachner, 1870	Minow	-	+	-	+
3. Family Cobitidae					
<i>Botia beauforti</i> Smith, 1931	Loach	-	-	-	+
<i>Acanthopthalmus anguillaris</i> (Vaillant, 1892)	Loach	-	+	-	+
<i>Acanthopthalmus myersi</i> Harry, 1949	Loach	-	+	+	-
<i>Acanthopthalmus oblongus</i> (Valenciennes, 1842)	Loach	-	+	-	+
<i>Acanthopsis choirorhynchos</i> (Bleeker, 1854)	Loach	-	-	-	+
<i>Acanthopsis</i> sp.	Loach	-	+	-	-
<i>Acanthopsoides gracilentus</i> (Smith, 1945)	Loach	-	-	+	-
<i>Barbucca diabolica</i> Roberts, 1989	Loach	-	-	+	-

Family / Scientific name	English common name	1	2	3	4
<i>Lepidocephalichthys berdmorei</i> (Blyth, 1860)	Loach	-	-	+	-
<i>Lepidocephalichthys hasselti</i> (Valenciennes, 1846)	Loach	-	+	-	+
<i>Serpenticobitis zonata</i> Kottelat, 1998 Family	Loach	-	-	+	-
4. Balitoridae					
<i>Balitora annamitica</i> Kottelat, 1988	Loach	+	-	-	-
<i>Homaloptera orthogoniata</i> Vaillant, 1902	Loach	+	+	-	-
<i>Homaloptera sexmaculata</i> Fowler, 1934	Loach	-	+	-	+
<i>Homaloptera smithi</i> Hora, 1932	Loach	+	+	+	+
<i>Homaloptera zollingeri</i> (Bleeker, 1835)	Loach	-	-	+	-
<i>Nemacheilus binotatus</i> Smith, 1945	Loach	-	-	+	-
<i>Nemacheilus kohchangensis</i> Smith, 1933	Loach	-	+	-	+
<i>Nemacheilus masyai</i> Smith, 1933	Loach	+	+	-	+
<i>Nemacheilus pallidus</i> Kottelat, 1990	Loach	+	+	-	+
<i>Nemacheilus platiceps</i> Kottelat, 1990	Loach	+	+	+	+
<i>Nemacheilus</i> sp1.	Loach	-	+	-	+
<i>Nemacheilus</i> sp2	Loach	-	+	-	+
<i>Nemacheilus</i> sp3.	Loach	-	+	-	+
5. Family Bagridae					
<i>Hemibagrus nemurus</i> (Valenciennes, 1839)	Yellow mystus	+	+	-	+
<i>Leiocassis siamensis</i> Regan, 1913	Siamese rock catfish	+	+	+	+
<i>Mystus micracanthus</i> (Bleeker, 1846)	Catfish	-	+	+	+
<i>Mystus mysticetus</i> Roberts, 1992	Irridescent mystus	-	-	-	+
6. Family Siluridae					
<i>Ompok siluroides</i> (Lecépède, 1803)	Sheatfish	-	+	+	+
<i>Pterocryptis cochinchinensis</i> (Val., 1839)	-	-	-	-	+
7. Family Amblycipitidae					
<i>Amblyceps</i> sp.	-	+	+	+	+
8. Family Akysidae					
<i>Akysis maculipinnis</i> Fowler, 1934	-	-	-	-	+
9. Family Sisoridae					
<i>Glyptothorax fuscus</i> Fowler, 1934	-	-	-	+	-
<i>Glyptothorax major</i> (Boulenger, 1894)	-	-	-	+	+
<i>Glyptothorax trilineatus</i> Blyth, 1860	-	+	-	-	-

Family / Scientific name	English common name	1	2	3	4
10. Family Clariidae					
<i>Clarias batrachus</i> (Linnaeus, 1758)	Batrachian Walking catfish	-	-	+	+
<i>Clarias meladerma</i> Bleeker, 1847	Blackskin catfish	-	+	-	-
11. Family Belonidae					
<i>Xenentodon cancila</i> (Hamilton, 1822)	Needle fish, Freshwater garfish	+	+	+	+
12. Family Hamiramphidae					
<i>Dermogenys pusilla</i> van Hasselt, 1823	Half – beak	+	+	+	+
13. Family Syngnathidae					
<i>Doryichthys martensi</i> (Peters, 1869)	Pipe fish	-	-	+	-
14. Family Synbranchidae					
<i>Monopterus albus</i> (Zuiew, 1733)	Swamp eel	-	+	+	+
15. Family Mastacembelidae					
<i>Macrognathus circumcinctus</i> (Hora, 1924)	Spiny eel	-	+	+	+
<i>Macrognathus maculatus</i> Cuvier, 1831	Spiny eel	-	-	-	+
<i>Macrognathus siamensis</i> (Günther, 1861)	Spotted spiny eel	-	-	+	+
<i>Mastacembelus armatus</i> (Lecépède, 1800)	Lasser spiny eel	+	+	+	+
<i>Mastacembelus favus</i> Hora, 1923	Armed spiny eel	+	+	+	+
16. Family Chandidae					
<i>Parambassis siamensis</i> (Fowler, 1937)	Siamese glassfish	+	+	+	+
17. Nandidae					
<i>Nandus nebulosus</i> (Gray, 1835)	Leaffish	+	+	+	+
<i>Nandus oxyrhynchus</i> Ng, Vidthayanon & Ng, 1996	Leaffish, Cameleon	-	+	-	+
<i>Pristolepis fasciata</i> (Bleeker, 1856)	Striped tiger nandid	+	+	+	+
18. Family Cichlidae					
<i>Oreochromis niloticus</i> (Linnaeus, 1757)	Nile tilapia	-	-	-	+
19. Family Eleotridae					
<i>Oxyeleotris marmorata</i> (Bleeker, 1856)	Sand goby	-	-	-	+
20. Family Gobiidae					
<i>Eugnathogobius oligactis</i> (Bleeker, 1875)	Goby	-	+	+	+
21. Family Anabantidae					
<i>Anabas testudineus</i> (Bloch, 1792)	Climbing perch	+	+	-	+
22. Family Belontiidae					
<i>Betta prima</i> Kottelat, 1994	Fighting fish	+	+	+	+



The specimens collection were performed from 17<sup>th</sup> of April, 1997 to 10<sup>th</sup> of May, 1997. Although we are able to make collections of fishes from most of the localities but there are some localities that we could not reach during that short period of time. Thus, it is necessary for some one who needs to learn more about fishes in these areas to do the research more intensively as well as use another method which is more accurate than ones we used in the past in order to get more species within the areas we could not reach in the past. We are sure there still are other species we could not obtain in the past.

#### ACKNOWLEDGEMENTS

We would like to thank all our teammates that gave us helping hands in collecting fish specimens at the National Parks and Wildlife Sanctuaries in the five eastern provinces of Thailand. Special thanks for all of the officials and Head of the Khao Aang Rue Nai Wildlife Sanctuary for giving us the chance to collect fish specimens possible and also to Kasetsart University Research and Development Institute (KURDI) for granting the fund for this project.

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