

# A Survey on Fish Species at Tram Chim National Park, Vietnam

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## ABSTRACT

The study entitled “A survey on fish species ratio at Tram Chim National Park, Tam Nong district, Dong Thap province” was conducted from October 2019 to August 2020 with the objective to assess the fish species composition within the A1 zone of Tram Chim National Park. The study identified 92 species of freshwater fish species coming in and out of the park. The time period when the most species appeared during the survey was from 12am to 6pm with the white fish group always prevailed over the black fish group.

**Key words :** Tram Chim National Park, fish species composition.

## Introduction

Aquatic resources in the Lower Mekong River are very diverse and abundant, with more than 1,300 species of freshwater fish recorded, annually providing quality products of more than 1 million tons of freshwater production for about 60 million people. Particularly in the Mekong Delta of Vietnam, more than 255 species of fish have been found. Tram Chim National Park is not only an important wetland area of the Long River Delta, but also the 4th most important Ramsar site in Vietnam and the 2000th in the world. With that importance, in order to have a basis for effective management and protection of natural resources for the following years, the topic “Survey on fish composition in Tram Chim Tam Nong National Park in Dong Thap” was conducted. implemented, to contribute to the biodiversity conservation plan for the period of 2019 - 2020 to serve the database for users to research and protect biological forms in the future.

## Method

Survey at 03 drainage points C3, C4, C7 of subdivision A1. The reason for choosing these sluices for survey is because during the time of receding water,

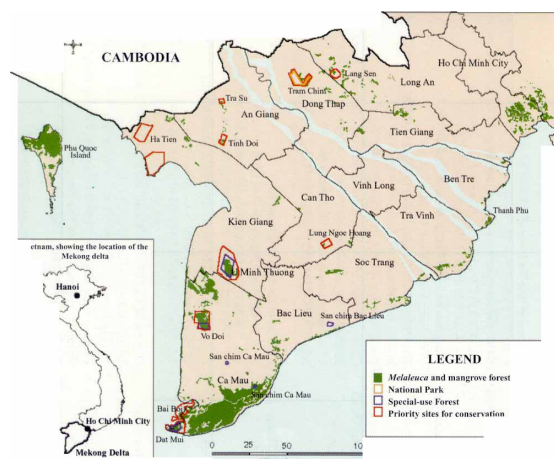


Fig. 1. Location map of Tram Chim National Park in the Mekong Delta (Bird Life, 2005).

these sluices usually flow out continuously, easy to survey; Fishing tools to collect samples: Use wind blower and bottom net; Sampling method: Collecting fish samples in and out.

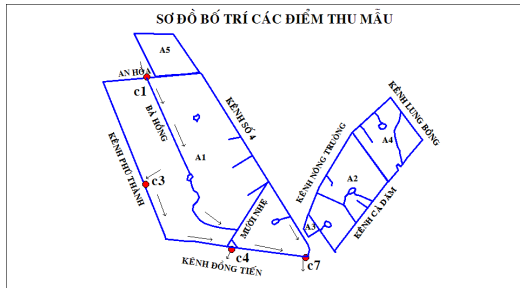


Fig. 2. Diagram of sampling points.



Fig. 3. Tools used in surveying fish.

## Results and Discussion

Through the results of two surveys of fish entering and leaving at subdivision A1 of Tram Chim National Park, a total of 92 species of fish appeared in 11 orders and 25 families.

Table 1 shows that, of the 92 identified species, the total occurrence frequency (%) of fish *Mystus mysticetus* was the highest at 73.8%, followed by the fish species *Oxyurichthysmicrolepis* accounted for 65.5% and *Anabas testudineus* accounted for 64.2% , all three species were always present during the sampling hours. Species with a frequency of occurring once in the harvest time include *Channa micropeltes* (2.3%), *Thrissocleshamiltonii* (2.3%), *Heterobagrusbocourti* (2.9%), *Pangasius lamaudii* (2.9%), *Channa striata* (3.2%) , fish *Leptobarbushoevenii* accounted for 4.3%, *Moruliuschrysophekadion* accounted for 6.8%, *Belodontichthysdinema* accounted for 4.7%, *OxyurichthysSp* accounted for 6.5% and *semiocellatus* accounted for 13%.

The time period when the most species appeared during the survey was from 12am to 6pm, with the frequency from 44 to 45 individuals, while the frequency of the fewest occurrences was from 0am to 3am with the frequency of appearance is 21 indi-

viduals, and time is from 6am to 9am with a frequency of 19 individuals.

During the sampling period, the white fish group always prevailed over the black fish group, the total frequency of occurrence of fish groups was 239 times. In which, the frequency of occurrence of white fish group is 163 times and the frequency of occurrence of black fish group is 76 times.

From Table 1 it can be seen that the average length of the largest individual is  $11.3 \pm 0.8$ cm, the fish with large length tends to go at night. The average length of the smallest individual is  $8.2 \pm 0.8$ cm, which can see the difference in size between large and small individuals is 3.1cm. Because it is the beginning of the flood season, the size of small fish and large fish does not differ much, mainly in the number of juveniles.

Due to the current excessive exploitation of people outside the National Park and the lack of control by management forces, the exploitation by electric pulse tools and the heavy use of pesticides in agriculture, this has led to a serious decline in the number of species and fish production outside the National Park. In addition, because the inside of the National Park is well protected, creating a natural environment for fishes to grow and develop, there is little human impact, so the number of species and production inside the National Park is higher than outside. Every year during the low water season, a large number of fish species are moved to the outside through the sewer system. This has contributed significantly to the supply of aquatic resources outside, increasing the diversity of fish species outside. From that, it can be seen that Tram Chim National Park is not only a habitat and breeding environment for aquatic species, especially fishes, but also a place to produce fish into the outside environment.

## Conclusion

Through the survey of fish species entering and leaving at subdivision A1 of Tram Chim National Park, the following results were recorded: A total of 91 freshwater fish species have been identified; in 11 orders and 25 families.

Through 2 surveys and comparison of fish species composition in subdivision A1 Tram Chim National Park. From the analysis data on fish species composition in the sampling areas. In order to maintain the richness of species composition and produc-

**Table 1.** Fish species in Tram Chim National park.

No	Family	Genus	Species
1	Engraulidae	Thrissocles	<i>Thrissocleshamiltonii</i>
2		Lycotrhissa Gunther	<i>LycotrhissaCrocodilus</i>
3	Clupeidae	Corica	<i>Corica soborna</i>
4		Corica	<i>Clupeoidesborneensis</i>
5	Notopteridae	Notopterus	<i>Notopterusnotopterus</i>
6	Mastacembelidae	Macrognathu	<i>Macrognathus aculeatus</i>
7		Macrognathu	<i>Macrognathussemiocellatus</i>
8		MastacembelusScopoli	<i>Mastacembelusarmatus</i>
9		MastacembelusScopoli	<i>Macrognathustaeniagaster Fowler</i>
10	Flutidae	Synbranchus	<i>Synbranchus bengalensis</i>
11		Monopterus	<i>Monopterus albus</i>
12	Cobitidae	Acantopsis	<i>Acanthopsis sp.1</i>
13		Acantopsis	<i>Acanthopsis sp.2</i>
14		Acantopsis	<i>Acanthopsis sp.3</i>
15	Cyprininae	Puntius Hamilton	<i>Barbonymusgonionotus</i>
16		Hampala Van Hasselt	<i>Hampaladispar</i>
17		Hampala Van Hasselt	<i>Hampalamacrolepidota</i>
18		Catlocarpio Boulenger	<i>Osteochilus melanopleura</i>
19		Thynnichthys Heckel	<i>Thynnichthys thynnoides</i>
20		Thynnichthys Heckel	<i>Tylognathus caudimaculatus Fowler</i>
21		Cirrhinus Oken	<i>Cirrhinusjullieni Sauvage</i>
22		Labiobarbus Van Hasselt	<i>Labiobarbus siamensis</i>
23		Labiobarbus Van Hasselt	<i>Crossocheilus reticulatus</i>
24		Puntius Hamilton	<i>Hampaladispar</i>
25		Puntius Hamilton	<i>Barbonymus altus</i>
26		Osteochilus Gunther	<i>Osteochilushasseltii</i>
27		Puntius Hamilton	<i>Puntius schwanefeldii Bleeker</i>
28		Leptobarbus Bleeker	<i>Leptobarbushoevenii</i>
29		Cyclocheilichthys Bleeker	<i>Cyclocheilichthysapogon</i>
30		Cyclocheilichthys Bleeker	<i>Cyclocheilichthysrepasson</i>
31		Cyclocheilichthys Bleeker	<i>Cyclocheilichthysenoplos</i>
32		Cirrhinus Oken	<i>Cirrhinusmicrolepis</i>
33		PuntioplitesH.M.Smith	<i>Puntioplitesproctozysron</i>
34		Puntius Hamilton	<i>Puntioplitesbulu</i>
35		Puntius Hamilton	<i>Puntius stigmatosomus</i>
36		Puntius Hamilton	<i>Hampaladispar</i>
37		Puntius Hamilton	<i>Puntius binotatus</i>
38		Puntius Hamilton	<i>Puntius pasrtipentazona</i>
39		Morulius Hamilton	<i>Moruliuschrysophekadion Bleeker</i>
40		Rasbora Bleeker	<i>Rasbora lateristriata Sumatra</i>
41		Rasbora Bleeker	<i>Rasbora borapetensis</i>
42		Catlocarpio Boulenger	<i>Catlocarpiosiamensis</i>
43		Oxygaster	<i>Parachelasiamensis</i>
44		Paralaubuca	<i>Paralaubucariveroi</i>
45	Rasborinae	Luciosoma Bleeker	<i>Luciosomableekeri</i>
46	Cobitidae	Botia	<i>Botialecontei</i>
47		Botia	<i>Botiamodesta</i>
48		Botia	<i>Botiaeostaki</i>
49		Botia	<i>Yasuhikotakiamodesta</i>
50		Botia	<i>Botiahymenophysa</i>
51	Clariidae	ClariasScopdi	<i>Clariasbatrachus</i>
52		ClariasScopdi	<i>Clarias macrocephalus</i>
53	Loricariidae	Hypostomus punctatus	<i>Hypostomusplecostomus</i>

**Table 1.** *Continued ...*

No	Family	Genus	Species
54	Siluridae	Wallago	<i>Wallago dincma</i> Bleeker
55		Wallagonia Myes	<i>Wallagoniaattu</i>
56		OmpokLacepede	<i>Ompokbimaculatus</i>
57	Schilbedae	Kryptopterus Bleeker	<i>Kryptopterusmoorei</i> Smith
58		Kryptopterus Bleeker	<i>KryptopterusBleekeri</i> Gunther
59		Pangasius Cuvier and Valenciennes	<i>Pangasius micronemus</i> Bleeker
60		Pangasius Cuvier and Valenciennes	<i>Pangasianodonhypophthalmus</i>
61		Pangasius Cuvier and Valenciennes	<i>Pangasius lamaudii</i> Bocourt
62		Pangasius Cuvier and Valenciennes	<i>Pangasius siamensis</i> Steindachner
63		Pangasius Cuvier and Valenciennes	<i>Pangasius macronema</i>
64	Bagridae	Pangasius Cuvier and Valenciennes	<i>Pangasius pleurotaenia</i>
65		Mystusscopoli	<i>Mystuscaovasius</i> Hamilton
66		Mystusscopoli	<i>Mystusvitatus</i>
67		Mystusscopoli	<i>Mystusrhegma</i> Fowler
68		Mystusscopoli	<i>Mystuswyckii</i>
69		Heterobagrus Bleeker	<i>Heterobagrusbocourti</i> Bleeker
70		Heterobagrus Bleeker	<i>Mystusgulio</i>
71	Hemirhamphidae	Zenarchopterus Gill	<i>Zenarchopterussectunccio</i>
72		Zenarchopterus Gill	<i>Hyporhamphuslimbatus</i>
73	Belonidae	Strongylura Van Hasselt	<i>Strongylurasirongylura</i>
74	Synapturidae	Synaptura Cantor	<i>Synapturapanoides</i> Bleeker
75	Cynoglossidae	Cynoglossus Hamilton	<i>Cynoglossuslingva</i> Buchanan and Hamilton
76	Syngnathidae	Doryichthys	<i>Doryichthysboaja</i>
77	Anabantidae	Trichopsis Kner	<i>Trichopsisvittatus</i>
78	Centropomidae	Chanda Hamilton	<i>Parambassiswolffi</i>
79		Chanda Hamilton	<i>Chanda siamensis</i> Fowler
80		Chanda Hamilton	<i>Parambassissiamensis</i>
81	Nandidae	Pristolepis Jerdon	<i>Pristolepisfasciata</i>
82		Nandus Cuvier and Valenciennes	<i>Nandus nandus</i> Hamilton
83	Anabantidae	Anabas Cuvier and Cloquet	<i>Anabas testudineus</i>
84	Belontiidae	Betta Bleeker	<i>Betta splendens</i> Regan
85		Trichogaster Bloch	<i>Trichogastermicrolepis</i>
86		Trichogaster Bloch	<i>Trichogastertrichopterus</i>
87	Ophicephalidae	Ophicephalus Bloch	<i>Ophicephalusmicropeltes</i> Cuvier and Valenciennes
88		Ophicephalus Bloch	<i>Ophicephalusstriatus</i> Bloch
89	Gobiidae	Glossogobius Gill	<i>Glossogobiusgiuris</i>
90		Oxyurichthys	<i>Oxyurichthysp</i>
91		Oxyurichthys	<i>Oxyurichthysmicrolepis</i>
92	Eleotridae	Oxeleotris Bleeker	<i>Oxyeleotrismarmoratus</i>

tion of fish species inside and outside the Park, it is necessary to strengthen the protection of fish species especially during the breeding season to create conditions for their development. development;

- It is strictly forbidden to use illegal fishing gear in fishing such as: electric pulses, pesticides and small net fishing gear.

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