

# IDENTIFICATION OF THE ENDANGERED SPECIES IN KARPASIA NATIONAL PARK (CYPRUS) AND THEIR NATIONAL HABITATS, AND ATTITUDE OF LOCAL STUDENTS TOWARDS SUCH SPECIES AND HABITATS

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## Abstract

The aim of this study is to identify the endangered species and habitats within the Karpasia National park, which is embraced as a unique place in the world, and the attitudes of children living in the vicinity of National Park towards the habitats and species. This study also aims to contribute on carrying that area to future generations upon proposing solutions to minimize problems, and to be an example for future similar studies. This study is conducted with the survey method on a total number of 37 5<sup>th</sup> grade primary school students during the spring semester of 2018-2019 academic year. The study was performed in two phases, first of which was the literature review on Karpasia and endangered species and natural habitats to identify the crucial species and habitats in Cyprus and Karpasia. Particularly the status of such species and habitats for Karpasia were analyzed accordingly. Upon the determination of serious environmental problems in the area, the Endangered Species and Habitats Attitude Survey with 12 items was applied in the second phase. The survey results show that endangered species and habitats within the Karpasia National park, which is embraced as a unique place in the world must be protected; students have positive attitudes in general and while they know or believe that endangered species and habitats should be protected when they are asked to participate for protection activities, they are not that much willing and do not have the related consciousness. This concluded as in other previous studies, students know that environment should be protected but they remain incapable in action. Technological developments, nature unconscious education and training system, urbanization and decrease in natural sites take individuals away from the nature. Hence, there is a need for studies for protection of Endangered species and habitats in Cyprus with nature education.

**Keywords:** Karpasia, nature education, endangered species, endangered habitats

## Introduction

The hills from Yedikonuk Town on the east of Kyrenia Mountains to Cape Apostolos Andreas (Zafer Burnu) by losing their elevation are known as Karpasia Mountains. The plateau that covers the largest area in Karpasia Peninsula losing its elevation towards the east with slight slope on the north, and consists of Miocene layers was eroded with deep valleys on north, north-west and south, south-east side of the peninsula. This erosion within the valleys revealed the flysh foundation underneath. The most prominent cleavage was

caused by Pigadi stream. This valley cutting the land transversely separates Karpasia hills completely from the Kantara Mountains, which is the easternmost of Kyrenia Mountains. Such mountains that did not expose to severe escalation like Kyrenia Mountains are in the form of low hills rather than mountains (İlseven, 2014). Karpasia National Park site is on the Karpasia Peninsula, the easternmost of Karpasia Mountains. The Cape Apostolos Andreas and Klidhes Islands are located on the tip of island while Dipkarpaz village and Ronnas dunes are on the west. Based on the boundaries foreseen under the Karpasia Ordinance, the protection area is 94.9 km<sup>2</sup> with 65.8 km coastal length. The first decision on “the Karpasia National Park” by the T.R.N.C Council of Ministers was taken on 5<sup>th</sup>

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October 1983 decision no. Ç(K-1) 880 – 83 and published in the Official Gazette no. 91 dated 23<sup>rd</sup> November 1983. Pursuant this decision, an area of 2000 hectares was declared as national park. In 1993, another decision by Council of Ministers declared the area stretching from the west of Dipkarpaz village up to the cape as the national park site. On 3<sup>rd</sup> November 1995, the Supreme Council of Monuments declared the area from Dipkarpaz village to the cape as “Natural and Archeological Protected Area” and the area by the dunes on Ronnas Bay on the north-east across the north and east of village as “Ancient Karpasia Protected Area”.

With its ecological diversity, the Karpasia National Park is one of the vital SEPAs in Cyprus. As indicated in many other significant studies (Viney, 1994; Gündüz, 2000; Philips and Bracewell, 2001; Eroğlu, 2011), the Karpasia National Park is “a unique” place with its rich bio-diversity, endemic flora and fauna, interesting geological formations, unspoiled beaches and rich historical background both in Cyprus and the whole Mediterranean as a significant world heritage site (Eroğlu, 2011). Around the world, people living in the vicinity of national parks have deep-rooted habits regarding the use of forest and agricultural lands within the national parks. Therefore, the attitudes of local inhabitants should be known respectively, which may minimize the negative circumstances between the national park and community. In North Cyprus, 4 of 21 important ecological sites, more than half of 1908 plant species, 24 of 47 endemic plants, 100 of rare plants, 2 of 5 protected mammal species, 12 of 16 protected reptile species, 147 of 215 protected bird species, 17 of 85 breeding beach of Loggerhead Sea Turtle *Caretta caretta* and *Chelonias mydas* and the 3<sup>rd</sup> most important breeding site (the Ronnas Bay) of loggerhead sea turtles in the Mediterranean are all inside of this park boundaries (İlseven *et. al*, 2014).

The Antique Karpasia Port as the first human settlement (Kastros- 6000 BC), the ancient city of Apendrika (Urania, Ourania) from the Classical era, the city of Agridia from the Archaic era, the city of Khelonas from the Neolithic era, Tsambres Cemetery, the Iron Age Anavrysia tombs, ancient stone pits, Agios Philon monastery Aphrodite Akraia temple, historic monuments and archeological sites from various eras are located within the boundaries of this park.

### Result and Discussion

The formal and non-formal education systems are crucial in the early-learning of environmental problems and important concepts about wildlife.

The sooner students are provided with such concepts, perception and awareness at their early ages; they would be raised in a culture that they would find much effective solutions for environmental problems and long-term problems. The findings on the Endangered Species and Habitats Attitude Survey conducted with 37 students are as follows:

**Item 1:** I believe that the endangered plants and species must be protected:

**Table 1. Distribution of Students' Answers for Item 1 (N=37)**

	N	%
neither agree nor disagree	1	2.7
agree	4	10.8
completely agree	32	86.5
<b>Total</b>	<b>37</b>	<b>100</b>

Environmental education at early ages is vital for empathy in the relationship with nature, and nature love (Çeliker and Akar, 2015). The endangered species are one of the most important elements for the students where they can relate with nature, which is an abstract and general concept. Therefore, it is important that 97,3% of students agree that the endangered plants and species must be protected, and only 2,7% is indecisive.

**Item 2:** Hunting or killing endangered animals makes me sad:

**Table 2. Distribution of Students' Answers for Item 2 (N=37)**

	N	%
Completely disagree	1	2.7
disagree	1	2.7
neither agree nor disagree	2	5.4
agree	4	10.8
completely agree	29	78.4
<b>Total</b>	<b>37</b>	<b>100</b>

T.R.N.C Hunting Federation is the biggest civil society organization with 47 registered hunting associations and 22.000 members. Regardless; when interviewed, 89.2% reflected that hunting or killing endangered animals makes them sad while 5.4% is indecisive. One person did not indicate any sadness on this matter.

**Item 3:** I would like to be a part of the protection activities for the endangered species and sites:

**Table 3. Distribution of Students' Answers for Item 3 (N=37)**

	N	%
Completely disagree	1	2.7
Disagree	3	8.2
neither agree nor disagree	9	24.3
agree	7	18.9
completely agree	17	45.9
<b>Total</b>	<b>37</b>	<b>100</b>

While 64.8% of students want to be a part of protection activities, 24.3% is indecisive. 10.9% of the students did not want to attend any protection activities. The great difference between the unwillingness of students to attend protection activities as 35.2% and students, who think that endangered plant and animals must be protected, as 98.3% leads a suspicion whether students really want to protect endangered animals.

**Item 4:** I think that uncontrolled industrialization, population increase and urbanization do not have any harm on the endangered living beings:

**Table 4. Distribution of Students' Answers for Item 4 (N=37)**

	N	%
Completely disagree	17	45.9
Disagree	3	8.1
neither agree nor disagree	7	18.9
agree	5	13.5
completely agree	5	13.5
<b>Total</b>	<b>37</b>	<b>100</b>

While 54% of students do not agree with the fact that uncontrolled industrialization, population increase and urbanization do not damage the endangered species, 46% of students do not support this subject or they are indecisive due to the positive momentum from the urbanization, industrialization and population increase in North Cyprus.

**Item 5:** I am sad that people do not do anything to protect environment:

**Table 5. Distribution of Students' Answers for Item 5 (N=37)**

	N	%
Completely disagree	1	2.7
neither agree nor disagree	5	13.5
agree	14	37.9
completely agree	17	45.9
<b>Total</b>	<b>37</b>	<b>100</b>

Among the participants, 83.8% of students reflected that they are sad about the insufficiency of preventive and rehabilitating actions for environmental pollution in North Cyprus, and that environmental education is not covered enough under the formal and non-formal education; and a significant rate of students as 13.5% are indecisive.

**Item 6:** I think that natural resources should be used carefully:

**Table 6. Distribution of Students' Answers for Item 6 (N=37)**

	N	%
neither agree nor disagree	4	10.8
agree	8	21.6
completely agree	25	67.6
<b>Total</b>	<b>37</b>	<b>100</b>

In the North Cyprus where the underground and ground resources are very limited, 89.2% of students have the perception that when not used carefully, natural resources may disappear, while 10.8% is indecisive.

**Item 7:** I support that people change natural environment to meet their needs and construct buildings, parking lots and offices:

**Table 7. Distribution of Students' Answers for Item 7 (N=37)**

	N	%
Completely disagree	15	40.5
Disagree	7	18.9
neither agree nor disagree	6	16.2
agree	5	13.5
completely agree	4	10.9
<b>Total</b>	<b>37</b>	<b>100</b>

As indicated in other dimensions, despite of the explicit parallelism between construction sector and pollution in North Cyprus, 59.4% of students do not support that people change natural environment to construct buildings, parking lots and offices in order to meet their needs since construction sector is one of the major income resources of Cypriots; 40.5% is indecisive or do not agree with the practices.

**Item 8:** I believe that everybody should do their part for the protection of endangered species:

Pursuant to Table 8, 89.2% of students believe that everybody should do something for the protection of endangered living beings while 5.4% is indecisive and does not agree at all.

**Table 8. Distribution of Students' Answers for Item 8 (N=37)**

	N	%
Completely disagree	1	2.7
Disagree	1	2.7
neither agree nor disagree	2	5.4
agree	9	24.3
completely agree	24	64.9
<b>Total</b>	<b>37</b>	<b>100</b>

**Item 9:** I think that I can help in the protection of endangered species and sites:

**Table 9. Distribution of Students' Answers for Item 9 (N=37)**

	N	%
Completely disagree	1	2.7
Disagree	2	5.4
neither agree nor disagree	7	18.9
agree	9	24.3
completely agree	18	48.6
<b>Total</b>	<b>37</b>	<b>100</b>

Considering Table 9, 73.9% of student believes that they can do things to protect the endangered species and sites while 18.9% is indecisive and 8.1% do not believe that they can do something.

The survey results reflected that students have positive attitudes in general and while they know or believe that endangered species and habitats should be protected when they are asked to participate for protection activities, they are not that much willing and do not have the related consciousness. This concluded as in other previous studies, students know that environment should be protected but they remain incapable in action.

Unfortunately, technological developments, nature unconscious education and training system, urbanization and decrease in natural sites take individuals away from the nature. Hence, there is a need for studies regarding environmental education (Kahyaoğlu, 2016). Consequently, the focus should be on the environmental trainings based on practice and learning by doing with regard to the Endangered Species and Natural Habitats.

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