

Habitats of Kolkheti lowland, ecotourism and recreational potential

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Abstract. *There are 36 critical hotspots of biodiversity in the world (Conservation International). The Caucasus hotspot, which spans 532,658 km² is one of them. Consequently, Georgia with the admired Kolkheti lowland surrounded by the Greater and Lesser Caucasus Ranges belongs to this hotspot region. Because of its climatic and geographic situation, the Kolkheti lowland represents a centre of biodiversity and human activity on the transition of Europe and Asia.*

The main habitats in the Kolkheti lowland are the relict Kolkheti relict forests, the peatlands, the wetlands, coastal sand zones, river mouths, open fresh and salt water areas. The main habitats in the Kolkheti lowland are the relict Kolkheti forests, the peatlands, the wetlands, coastal sand zones, river mouths, open fresh and salt water areas. Habitats of Kolkheti lowland such as: Relict Forest and Sphagnum mire are under the UNESCO WNH nomination since 2021 (Feasibility...2019).

Tourist and recreational potential. The tourist and recreational potential of the territory is determined by the attractive natural environment: rivers, wildlife and seascapes, peatlands, migratory birds, rich historical and cultural values. The protected area has the potential to develop a variety of tourist products. These are: boating, fishing (amateur fishing), bird watching tourism, cultural-historical, educational, scientific-research and rural tourism.

Key word: *Kolkheti, habitat, endemic, relict.*

Introduction.

There are 34 critical hotspots of biodiversity in the world (Conservation International). The Caucasus hotspot, which spans 532,658 km² is one of them. Consequently, Georgia with the admired Kolkheti lowland surrounded by the Greater and Lesser Caucasus Ranges belongs to this hotspot region. Because of its climatic and geographic situation, the Kolkheti lowland represents a centre of biodiversity and human activity on the transition of Europe and Asia. Kolkheti lowlands belongs to (Ganidze, R.1996): World: - Oldest Mediterranean; Region – Sub -Mediterranean; Province – (*Colchis*) Kolkheti or eastern euxinus; District – (*Colchis*) Kolkheti lowland and foothills.

During the last Glacial Maximum, Kolkheti lowland constituted an important refuge for the flora of the Europe (Tarasov et.al.2000), where many plant species have preserved that used to be wide-spread in Europe before and disappeared. For example, the Kolkheti mires currently harbour – next to Tertiary relict species like *Rhododendron ponticum* – many sub-Mediterranean, temperate, and boreal relict species. Globally extraordinary habitats in the Kolkheti lowland are the relict Kolkheti forests and the percolation bogs only existing here.

The Kolkheti forests are unique ecosystems of characteristic warm-humid broad-leaved deciduous mixed forests with evergreen understory, rich in endemic and relict tertiary species, which are mostly spread on the Kolkheti lowland and the adjacent foothills of the Lesser Caucasus

Range (Matchutadze 2019).

The peatlands of the Kolkheti lowland with their luxurious *Sphagnum* vegetation form a structural and functional transition between the peatlands of the boreal and those of the tropical zones. The special character of the area and its peatlands brought to the distinction of a special Kolkheti peatland region within Eurasia.

There is interdependence between the species and its habitat. Relicts and endemic plants can develop in their historically established habitats. The habitat is a micro-ecological environment, created by its plants.

In order to protect the endangered species, it is necessary to protect their habitats as well. In Georgian law of environment do exist law about fauna but there is no law similar to this about habitats (კოლხეთის...2019, Matchutadze et.all. 2010, მაჭუტაძე ... 2009, მაჭუტაძე ... 2010).

Objective is habitats of Kolkheti lowland from Sarpi to Anaklia coast line. The different habitats and their vegetation were studied during the period of 1998-2008. The vegetation mapping with the determination of the cover of the vascular plant and moss species followed the abundance method after DAFOR (D –Dominant, - Abundant, F – Frequent, O-Occasional, R-Rare).

Research methodology of vertebrate animals in wetlands.

Large mammals were identified by footprints, sleeping/resting locations, burrows, tail tracks /lines and excrement. Medium and small mammals were caught and released safely using special traps and bait. Birds were observed with binoculars and a telescope, identified visually and with an identification guide. The attraction and capture of reptiles was done with tin boxes of various construction, using solar energy. Amphibians were grouped in specific traps, using insects and special and other bait. Fish was sampled using the cast nets and gill nets, various types of traps, hooks, spinning and “Gori” type seine nets. After identification they were subsequently live released back to their living environment (Goradze et al., 2002, 2009).

Wetland habitats of Kolkheti are internationally important because they provide for the migrant and the resident nutrition, their families, species, subspecies and populations interactivity. Wetland ecosystems are "maintenance stations" for migratory and waterfowl, recreation and for nutrition, which is the benefit of these areas at the global level It is expressed and for the purpose of conservation of biodiversity It has a special value. Migration routes to the north pass here between Europe and Africa. Habitats of Kolkheti lowland such as: Relict forest and *Sphagnum* mire are under the UNESCO WNH nomination since 2021 (Feasibility...2019). The main habitats in the Kolkheti lowland are the relict Kolkheti forests, the peatlands, the wetlands, coastal sand zones, river mouths, open fresh and salt water areas (Matchutadze ...2008, Matchutadze 2009, Matchutadze 2010, Matchutadze 2010).

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Habitats of Kolkheti lowland

No.	Habitat	IUCN	Definition/ Description		Example
1	Sea littoral		Littoral/benthos with <i>Zostera marina</i>		Grigoleti, Tskaltsminda
2	Coastal sand dunes	VUL	Significant areas in Chorokhi delta and Anaklia-Churia coastline are still unpolluted. Dominated by: <i>Pancreatium maritimum</i> , <i>Convolvulus persicus</i>	high	Kobuleti, Chaqvi, Piti, Grigoleti
3	Juncetum		Areas dominated by <i>Juncus</i> sp. (but without peat) often inundated	med	Ispani II mires, Imnati
4.	Permanent freshwater ponds	KE	Dominant species is <i>Trapa colchica</i> , <i>Trapa maleevi</i> , <i>Trapa hyrcana</i> <i>Potamogeton</i> sp. <i>Ceratophyllum demersum</i> , <i>Egeria denca</i> (as invasive species) <i>Nymphaea alba</i> , <i>Nymphaea colchica</i> and <i>Nuphar lutea</i>	high	Chorokhi delta, Grigoleti, Tskaltsminda, Narionali. Narionali, Grogoleti, Anaklia, Imnati, Chorokhi
5.	Peatland		Peatland is an area with or without vegetation with a naturally accumulated peat layer at the surface		
5.1.	Percolation mire	VUL	bog which is fed by rain water or precipitation (ombrogenous) Raised above surrounding landscape. Percolation bogs are found in landscapes where water supply is large and evenly distributed all over the year. With regard to the bog the water supply only arises from the precipitation. The water table in the mire is almost constant. Species like <i>Sphagnum imbricatum</i> , <i>Sphagnum papillosum</i> , <i>Molinia litoralis</i> are dominating. Peat is presented with under moss layer from overgrown plants remnants, alive roots.	high	Ispani II, Imnati, Grigoleti
5.2	Fen	VUL	Fens (geogenous), are fed by groundwater water from the surroundings. Situated in depressions. After peat extraction which was carried out by dredging open water remained.	high	Anaklia-Churia
6	Meadow		Agricultural used land (formed after drainage and deforestation)		
6.1	Pasture land		Used for hay-meadow Pastureland dominated by: <i>Paspallum thunbergii</i> , <i>Polygonum thunbergii</i> .	low	Grigoleti, Anaklia-churia, chorokhi
6.2	Arable land		Used for growing of monoculture (<i>Zea mays</i>)	low	Guria, Kobuleti, Anaklia-chiria

7.	<i>Relict Kolkheti forest</i>	<i>VUL</i>	<i>mires of Kolkheti are unique for the fact that they are naturally transformed into the fragmentally presented Kolkheti forests characteristic warm-humid broad-leaved deciduous forests with evergreen understory, rich in endemic and relict tertiary species: Pterocaria pterocarpa, Quercus hartwissiana, Buxus colchica, Carpinus betulus, Morus nigra, Crataegus macrophylla, Humulus lupulus, Salix caprea</i>	<i>high</i>	<i>Churia, Imnati, Ispani I and Ispani II</i>
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notes: ° At the moment for Georgia

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კოლხეთის დაბლობის ჰაბიტატები, რეკრაციული და ეკოტურისტული პოტენციალი

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აბსტრაქტი

მსოფლიოში ბიომრავალფეროვნების 34 კრიტიკული ცხელი წერტილია (Conservation International). ერთ-ერთი მათგანია კავკასიის ცხელი წერტილი, რომელიც მოიცავს 532,658 კმ²-ს. შესაბამისად, საქართველო, კოლხეთის დაბლობით, რომელიც გარშემორტყმულია დიდი და მცირე კავკასიონის ქედებით, მიეკუთვნება ამ ცხელ წერტილს. კოლხეთის დაბლობი თავისი კლიმატური და გეოგრაფიული მდგომარეობიდან გამომდინარე წარმოადგენს

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საკვანძო სიტყვები: კოლხეთი, ჰაბიტატი, ენდემი, რელიქტი