

## 11. The Fieri wetlands

### Summary

The coastal wetlands of Fieri spread between the two deltas of Semani and Vjosa. Important sites are the wetlands of the Semani delta (49 km<sup>2</sup>) near Topoja and Dermenasi, the old river bed of the Semani (0.8 km<sup>2</sup>) in Libofsha, the wetlands and the pine forest in the northern part of the Vjosa delta and the managed reserve of Pische Poro (15 km<sup>2</sup>) near Dazeza (Fig. 11-2).

The town of Fieri with today more than 75'000 inhabitants has been established only after the 2<sup>nd</sup> World War. Together with Patosi (8 km far), Fieri became the center of petrol industry with extraction and refinement of crude oil. The town is surrounded mainly by reclaimed agricultural lands of alluvial and marshy origin, with the remaining Roskoveci marsh (1.3 km<sup>2</sup>) as a last witness.

### 11.1. How to reach the area

Fieri is the best site for starting visits to the deltas of Semani and Vjosa and the wetlands nearby (Fig. 11-2).



**Figure 11-1:** Semani wetlands (Fieri)  
(Photo: L. Kashta).

The sites south of the Semani delta and the Semani dunes, the Darezeza-Povelça beach, the wetlands and the Poro forest are easily reached following the rural roads passing Dermenasi, Hoxhara, Topoja to the Semani beach (about 18 km distant) or from Levani at the road Fieri-Vlora towards the Shtyllasi or the Poro villages (Figs. 11-2 and 11-3).

The wetlands north of the Semani delta are approached from the main road Fieri-Lushnja at Mbrostari village on rural roads through Libofsha village or from the Shoferi tavern in direction west. The dead riverbed, known as the crown of the Old riverbed of the Semani and other dead river parts and meanders are accessible from the Adriatiku village (Libofsha municipality). Most roads are not paved and rather difficult to pass by car.



**Figure 11-2:** Map of the transitional wetlands between the deltas of the Semani and the Vjosa rivers with the main inhabited centers, habitats and roads (red) (districts of Lushnja, Fieri and Vlora) (Google Imagery, 2008, modified).



Figure 11-3: Enlarged map of the Semani delta (Lushnja and Fieri) (Google Imagery, 2008, modified).

## 11.2. Information about the most important sites

The wetlands and natural reserve sites of the Semani delta, the old Semani riverbeds and the Poro forest are the important sites of the zone. Beside that some relevant cultural sites are well worth mentioning for a visit. The famous museum town of Berati just 35 km far from Lushnja, and the Ardenica monastery from the 13<sup>th</sup> and 14<sup>th</sup> century near Lushnja town with the church of Saint Virgin Mary built under the Epirus Despot (Fig. 11-4) are important in Albanians history. In this monastery the marriage of George Kastrioti (Skanderbeg) with Andronika Arianiti was celebrated on April 21<sup>st</sup>, 1451. The oak forest and the Mediterranean cypresses around are attractive. From the top of the hill a broad view on the Myzeqe plain (see Fig. 10-5) is obtained, ranging from the Karavasta lagoon and the sea to the technical installations of the pumping wells in the Roskoveci and Patosi plains.



**Figure 11-4:** Church of Saint Virgin Mary (17<sup>th</sup> century) in the Ardenica monastery (Lushnja) (Photo: A. Miho).

**Figure 11-5:** The archaeological center of Apollonia (Fieri); **above:** the Bouleuterion (Hall of Athletes, 2<sup>nd</sup> century AD); **middle:** Greek amphitheatre (2<sup>nd</sup> century BC); **below left:** the big colonnade in Doric and Ionic style (4<sup>th</sup>- 3<sup>rd</sup> century BC); **below right:** monastery and Saint Mary's Church 13<sup>th</sup> century AD (Photos: A. Miho). »»»



South of the Semani delta the archaeological center of Apollonia must not be ignored (Fig. 11-5). From the road from Fieri to the Semani beach turning towards Pojani village Apollonia is reached after 6 km. The ancient town was situated on an earlier settlement of the Illyrian tribe Chaonia. It was founded in 588 BC and became one of the largest Greek colonies in Albania. At that time the town was located close to the sea and to the former bed of the at that time navigable river Vjosa. Apollonia reached up to 60'000 inhabitants during its prosperous period.

#### 11.4. Physico-geographical characteristics

The Semani wetland zone extends between the Semani and Vjosa rivers in the southern part of the coastal Adriatic wetland, known as the Small Myzeqe or Myzeqe of Fieri (Figs. 11-2 and 11-3). It rose gradually and converted to continental land at the end of the Pliocene and during the Quaternary. The region is mainly an alluvial plain formed by the activity of the rivers Semani and Vjosa during the Plio-quaternary, a process still continuing. By sedimenting solid materials of these rivers, more than 35 km<sup>2</sup> of new land have been formed during the past 60 to 70 years. The sedimentation process is clearly visible for the Semani, a river with a large watershed comprising mountains and hills consisting mainly of erosive terrigenous materials. The average amount of total suspended solids (TSS) in the Semani reached some years ago 286 mg l<sup>-1</sup>, the highest value among the rivers crossing the Western Lowland. It results in 863'750 t per year of suspended solids transported to the sea. Not astonishingly that the coastline of the Semani delta has advanced some hundred meters during the last ten years. Semani is distinguished to the other rivers also for high amounts of nitrates transported to the Adriatic Sea (*see* § 5.5 in Chapter 5; Tab. 5-10 and Fig. 5-4; Miho *et al.*, 2005) .



**Figure 11-6:** The Pojani plain (Fieri) (Photos: A. Miho)

The Semani wetland zone is divided into several plains, like the plains of Frakulla (in the northern part of Vjosa), Roskoveci, Bubullima, Fieri or Pojani and Hoxhara (Fig. 11-3). The very low and flat relief is typical for the Pojani and Hoxhara plains. The land is mainly alluvial and fertile. Some peat land formed by reclaiming of former marshes and saline land is found along the coastal zone, as in the former marsh of Hoxhara.

The present transitional zones (Figs. 11-1, 11-3, 11-10) are the remains of the former Hoxhara plain, which had a total area of 220 km<sup>2</sup>, 66 km<sup>2</sup> of it were marshlands. Also in the Fieri-Roskoveci plain of about 100 km<sup>2</sup> many marshes have been reclaimed. Today only a small spot of about 1.3 km<sup>2</sup> in Roskoveci in the mid of the terrigenous hills of the Pojani remain as a last witness of the former large marshland zone (Figs. 11-12 and 11-13).

As discussed in previous chapters the rivers crossing the Coastal Lowland often run in shallow beds within their alluvium deposits. Therefore a slight increase of the water level causes a flood often covering large areas. During periods of flood the rivers may even change their beds. This is typically seen for Semani river that moved its delta 5 or 6 times during the last 100 years. Within a coastal line of 25 km the mouth moved always towards the south. The abandoned or dead beds of Semani and Vjosa extend over several kilometers, similar to the Tale (Mati) and Kulari (Shkumbini) discussed before. During the wet season most of these dead meanders are loaded with water forming wetlands, called '*delle*' by local people, i.e. the *delle* of Semani and the *delle* of Vjosa.

The Adriatic Sea strongly affects the local climate concerning temperature and solar radiation as in the whole Western Coastal Lowland. Sunshine is highest in the Fieri region with 2840 hours year<sup>-1</sup> with up to 341 sunny days. Eastern and southeastern winds dominate in the zone. The mean temperatures during summer are lower than in the other parts of the country, due to the refreshing action of the sea. The mean annual temperature is 15.1°C in Fieri, while the mean temperatures of the coldest and warmest months are 7.3°C and 23.1°C, respectively. The maximum temperature recorded in Fieri is 40.8°C, the minimum is -13°C. The yearly precipitation is with 985 mm in Fieri much lower than in the central or northern parts of the Coastal Lowland. It equals about half of the rainfall of the Shkodra region. Rainfall concentrates on winter; the lack of rain during summer often causes drought periods of 8-10 weeks or more. The distribution of precipitation can be extreme; in Fieri a rain event with 345 mm within 24 hours has been

**282** recorded. Snow is quite a rare phenomenon.



Man made installations, reservoirs and irrigation channels are of fundamental importance in the Myzeqe plain around Fieri. The Kuriani reservoir near Roskoveci town is the second largest irrigation reservoir in Albania with a capacity of 30 million m<sup>3</sup> of water. A channel from Vjosa to Levani and Fieri acts as the main irrigation supply for the Hoxhara plains, while other draining channels and pumping stations direct surplus water into the sea.

Many wetlands in the region of Fieri and Patosi have been heavily polluted by the petroleum industry during the former regime. In the Patosi plain 2000 petroleum wells spread over 200 km<sup>2</sup> produced about 2000 t per day some decades ago. Oil extraction has been reduced at present to 400 t per day. These wells combined with the pumping network contaminate both ground water and surface water. It is estimated that about 1 to 2% of the petrol production escape into the environment. The 'iron forest' of pumping wells, although out of function, still continues to be a main pollution source of inland and coastal water.

Moreover the oil refining factory in Ballshi discharges high quantities of hydrocarbons into the Gjanica river, as the wastewater treatment plant does not function properly. This makes the Gjanica, a branch of the Semani to one of the most polluted rivers of the Adriatic coastal lowland. The agricultural land is crossed by a net of drainage and irrigation channels and covered by hundreds of pump jacks on oil wells. Part of the oil leaches into the drainage channels and is collected in the Roskoveci-Hoxhara drainage collector (Fig. 11-3). The collector channel starts at the Roskoveci marsh, continues through the Marinza oilfield, passes the Mbrostari bridge, follows by the village Mujalli, between Hoxhara and Topoja villages and finally flows into the Adriatic Sea. The Hoxhara collector is the main polluter of the Semani beach and the wetlands of the Semani delta. Experts confirm that the waste water collected at the oil decantation stations of Marinza and Sheqishta contain up to 190 mg l<sup>-1</sup> oil in the water (Prifti and Karriqi, 2012).

Large amounts of oil float permanently on the surface of the water. It is estimated that about 350 tons of crude oil have been discharged within 5 years, containing pollutants such as phenols. Oil layers are present even on the sea water surface along the coast from the collector outlet to the Semani beach, the Semani delta and in northern direction towards the Divjaka zone. In spite of that, the water is used for irrigation by the local community.

Starting in 2008 the Trans-Adriatic Pipeline (TAP) that will transport natural gas from the Caspian Sea and Middle East regions to Europe is discussed. The gas pipeline is promoted by the Swiss Elektrizitäts-Gesellschaft Laufenburg (EGL) and will begin near Thessaloniki (Greece), cross through Albania and the Adriatic Sea and end near Brindisi. The Albanian Government has approved an area in the Semani zone where the liquid natural gas (LNG) terminal shall be constructed. Such future activities will put an additional impact on the transitional wetlands and the marine coast (<http://www.energy-community.org/pls/portal/docs/698178.PDF>).

#### 11.4. Description of the most important habitats

About 24 km of coastal sandy dunes and beaches with a width of 50-100 m follow along the littoral zone between the deltas of the rivers Semani and Vjosa. Pine belts, marshes and lagoons are found there in almost natural condition (Figs. 11-1, 11-7, 11-9 to 11-11). In the 9 km littoral zone of the northern part with a surface 62 km<sup>2</sup> close to the Semani delta there are about 4 km<sup>2</sup> of forested areas, mainly with cultivated pines.

The Godulla Lake (Figs. 11-2 and 11-3), its beach, wetlands and forests are close to the Semani mouth near Sheq Marinasi village; some parts are reached only at very low tide. Near Povelça village sandy dunes with an asymmetric profile depending on wind velocity are arranged linearly in north-south direction. They may be 25-30 years old, have an average height of 7 m and a width of 16 m; the height ranges from 1 to 12 m. The Godulla region has been discussed in Chapter 10.



**Figure 11-7:** Wind effects on the pine forest (*Pinus halepensis*) in the Semani beach zone (Fieri) (Photo: A. Miho).

The southern part with a size of 68 km<sup>2</sup> and situated closer to the Vjosa delta belongs to the Dermenasi municipality. It counts 12 villages with about 1200 inhabitants.

Roughly 15 km<sup>2</sup> of coastal forests, mainly of Aleppo pine (*Pinus halepensis*) and Umbrella pine (*Pinus pinea*) (Fig 11-7) and 12 km<sup>2</sup> of other coastal habitats are close to the Darezeza village. Near Poro village the managed reserve of the Poro Pine - Pische Poro forest (Fig. 11-2) extends with Black pine (*Pinus nigra*) a tree quite uncommon at sea level as it normally grows in the oak and conifer belt above 1000 to 1200 m above sea level.

The crown of the old riverbed of Semani in the Libofsha municipality is a pristine alluvial forest. For its natural values it is indexed in the checklist of the Albanian natural monuments. Abandoned meanders of the Semani river are also present in the western part of the Adriatiku village close to the Karavasta lagoon. As their ground is about 3 m below sea level, these meanders are filled with water during the wet season and form special freshwater ecosystems, rich in fish, such as bass, mullets, eel or carp.

Near Roskoveci town at the national road from Fieri to Berati, the Black Marsh, a small spot extends as a relict, still witnessing the former marshland of Hoxhara (66 km<sup>2</sup>) reclaimed in 1960s. It is covered mainly with Common reed (*Phragmites australis*) and the Narrowleaf cattail (*Typha angustifolia*) (Figs. 11-12 and 11-13). The Black Marsh system was previously used as a collecting pond, used to feed the reservoir of Kuriani in the eastern part.

## 11.5. Biodiversity of the Semani-Povelça zone

**Flora:** Compared to other Albanian wetland areas, less information on the biology of the region is available. For details the reader is recommended to consult the information presented on the Karavasta and Narta region, the two neighboring zones.

The marine coastal communities are strongly influenced by the rivers Semani and Vjosa with the dynamics of their sediment transports and their water regime. Conditions for a stabilization of the typical marine plant communities in the area are largely missing.

Like in many places in the Western Coastal Lowland, the natural terrestrial vegetation has been totally altered by human activities. Natural vegetation, mainly shrubs (*maquis*) and less frequently forests, is limited only to the small coastal zone and the hilly slopes. The vegetation in dunes and coastal lowlands depends on many specific environmental factors, i.e. a sandy substrate, drought or high humidity as in marshes and lagoons, and salinity. Along the narrow sandy belt close to the sea associations with the grasses *Elymus farctus*, *Ammophila arenaria* and *Sporobolus pungens* start growing; we also find pioneer beach species, like *Cakile maritima*, and psammo-nitrophilic species like *Atriplex tatarica-hastata*, accompanied by *Euphorbia paralias* or *Pancratium maritimum*.

Typical Mediterranean pine forests spread along the two deltas, more extended in the Semani and Poro region. The Pishe Poro forest is a protected area since 1958; the Aleppo pine (*Pinus halepensis*) is the most dominant tree, mixed with Umbrella pine (*Pinus pinea*) and shrubs, like heather (*Erica manipuliflora*) or true myrtle (*Myrtus communis*).

**Figure 11-8:** Interesting plants in the Semani wetlands: 1: *Orchis albanica* (= *Anacamptis morio* ssp. *caucasica*); 2: *Alkanna tinctoria* and the butterfly *Gonepteryx* sp.; 3: Brackish water crowfoot, *Ranunculus baudotii*; 4-5: the rare submerged aquatic stonewort *Chara aspera* in the Semani brackish water; the reproductive organs in 5 are red by carotenoids (Photos: L. Kashta).»»»





**Figure 11-9:** *Above:* Path in marshy habitats of the Semani delta (Fieri) with Coojong (*Acacia saligna*) (*below*), a naturalized invasive species of the alluvial (Photos: A. Miho).



In the water *Charophytes* (stoneworts) are abundant. The rather rare *Chara aspera* is observed in the brackish water of Semani (Fig. 11-8). These habitats are known as hard oligo-mesotrophic and a high base content with mostly calcium and rarely magnesium.

Large areas between Semani and Povelça villages are covered with halo- and halo-hygrophilic vegetation. In saline soil annual pioneers develop like *Salicornia europaea* and *Suaeda maritima*, as well as more stable associations with *Arthrocnemum* spp., *Artemisia caerulescens* and *Limonium vulgare*. In brackish marshes *Juncus maritimus* (Fig. 11-11) and *Schoenus nigricans* spread mixed with *Tamarix hampeana* (Figs. 11-1). *Asphodelus aestivus* is sparsely found in limited spots of abandoned alluvial lands or slopes (Figs. 11-6) that reveal various colors from white to pink in spring; even *Pteridium aquilinum* is also common in these habitats. Typical brackish water plants are listed in table 11-1.

**Figure 11-10:** The Semani delta; **above:** rushes (*Juncus* spp.); **Below:** covering wide areas in marshy habitats (Photos: A. Miho and S. Beqiraj).



**Table 11 -1:** Halo- and halo-hygrophilic vegetation in Semani region (Fieri).

Scientific name	Common name	Albanian name
<i>Acacia saligna</i>	Coojong	Mimoza bregdetare
<i>Alnus glutinosa</i>	Elm	Verriu i zi
<i>Artemisia caerulescens</i>	Sagebrush	Pelini i bruzte
<i>Arthrocnemum</i> spp.	Glasswort	Artoknema
<i>Fraxinus angustifolia</i>	Narrow-leafed ash	Frasheri i zi
<i>Juncus maritimus</i>	Sea rush	Kulmaku, Zhuka bregdetare
<i>Limonium vulgare</i>	Sea lavender	Fshesa e rendomte
<i>Phragmites australis</i>	Common reed	Kallamishjtja
<i>Platanus orientalis</i>	Oriental plane tree	Rrapi
<i>Populus alba</i>	Silver poplar	Plepi i bardhe
<i>Pteridium aquilinum</i>	Common bracken	Fiershqipe
<i>Salicornia europaea</i>	Common glasswort	Jambruku evropian
<i>Salix</i> spp.	Willow	Shelgje
<i>Schoenus nigricans</i>	Black bogrush	Skeni ziosh
<i>Scirpus</i> spp.	Club-rush, Bulrush	Shqirra
<i>Suaeda maritima</i>	Herbaceous seepweed	Minurthi i detit
<i>Tamarix hampeana</i>	Tamarisk	Marina
<i>Tamarix parviflora</i>	Tamarisk	Marina lulevogel
<i>Typha latifolia</i>	Common bulrush	Shavari, Rogozi gjethgjere
<i>Ulmus minor</i>	Field elm	Vidhi
<i>Vitex agnus-castus</i>	Vitex, Chaste tree	Konopica

Interesting plants observed in the zone are *Orchis albanica* (= *Anacamptis morio* ssp. *caucasica*), the Brackish water crowfoot (*Ranunculus baudotii*) and Dyer's bugloss (*Alkanna tinctoria*) (Fig. 11-8).

Limited spots in the fluvial meanders of Vjosa and Semani as well as in their dead beds show typical hygro-hydrophilic vegetation (Fig. 11-11), represented mainly by alluvial forest with *Populus alba*, *Fraxinus angustifolia*, *Salix* spp., *Alnus glutinosa* and *Ulmus minor*. Due to human impact, these forests have often a shrubby character. Other vegetation types in these habitats are dominated by tamarisks (*Tamarix parviflora*), by the Oriental plane tree (*Platanus orientalis*), Chaste tree (*Vitex agnus-castus*) and by willows (*Salix* spp.).





Figure 11-11: Visit in the Semani wetlands (May 2007) (Photo: A. Miho).

Freshwater marshes, ponds and channels, often abundant in the whole zone, are covered uniformly by a reed bed, containing *Phragmites australis*, and less frequently by *Typha latifolia* and *Scirpus* spp. (Fig. 11-12 and 11-13). The Black Marsh in Roskoveci is still a small natural oasis and of special interest and importance in this large plain, although it is heavily transformed and impacted by man. It may still act as an emergency fodder and rest place for migratory waterfowl and aquatic animals, fish, amphibians or reptiles. The habitat has attracted the interest of botanists as rare aquatic plants prosper there, like the floating fern *Salvinia natans*. The water surface is covered by floating plants like duckweed (*Lemna* spp. and *Spirodela polyrrhiza*) (Fig. 11-12). The site has been proposed as a particular Plant Area (IPAs) with a high priority for future conservation. Despite of its distance from the coast, it bears the same nature values and its plant diversity is closely related to the transitional coastal habitats.



**Figure 11-12:** *Above:* reed (*Phragmites australis*), the main vegetation cover in the Black Marsh (Roskoveci). The water surface is covered by floating plants like duckweed (*Lemna gibba* and *Spirodela polyrrhiza*) (*right*), and floating fern (*Salvinia natans*) (*below*) (Photos: L. Shuka).





**Figure 11-13:** Black Marsh in Roskoveci (Photo: L. Shuka).

**Fauna:** The fauna in the Semani-Povelça area is only poorly known and scientific studies are scarce. The benthic coastal fauna is characterized by the typical fauna of a soft ground with sand, silt and clay sediments. It is highly influenced by the two rivers. Species richness seems relatively poor as judged from a preliminary approach in the depths from 0 to 25 m. Mollusks are among the most frequent in the macrozoobenthos; main species are listed in table 11-2.

Fish fauna also seems to be poor. Besides the well known factors related to pollution and human impact in general, this may also be linked to the scarce macrobenthic community which is the main food base for many fish species. Species richness of fish is better known; from catch data the most common species are given in table 11-3.

Birds seem clearly territorial including the Northern lapwing (*Vanellus vanellus*), the Kentish plover (*Charadrius alexandrinus*) and the Collared pratincole (*Glareola pratincola*). From their behavior and the presence of suitable habitats, breeding of some Little ringed plover (*Charadrius dubius*), Stone curlew (*Burhinus oedipnemus*) and Avocet (*Recurvirostra avosetta*) can be assumed. A short assessment of the waterfowls has been presented by Tempelman (1998).

Table 11- 2: Common species of the macrozoobenthos of Semani-Povelça coast.			
Scientific name	Remarks	Scientific name	Remarks
<b>Gastropods</b>		<b>Polychaete worms</b>	
<i>Bittium reticulatum</i>		<i>Eunice aphroditois</i>	
<i>Cerithium vulgatum</i>		<i>Glycera convoluta</i>	
<i>Hexaplex trunculus</i>		<i>Nephtys hystricis</i>	
<i>Murex brandaris</i>		<i>Nereis diversicolor</i>	
<i>Neverita josephinia</i>		<i>Sternaspis scutata</i>	
<i>Turritella communis</i>	most frequent	<b>Decapods</b>	
<b>Bivalves</b>		<i>Carcinus mediterraneus</i>	
<i>Chamelea gallina</i>		<i>Crangon crangon</i>	
<i>Donax trunculus</i>	most frequent	<i>Dardanus arrosor</i>	
<i>Glycymeris insubrica</i>		<i>Macropipus depurator</i>	
<i>Mactra corallina</i>		<i>Paguristes oculatus</i>	
<i>Tellina planata</i>		<i>Palaemon elegans</i>	
<i>Tellina pulchella</i>		<b>Echinoderms</b>	
<b>Cnidarians</b>		<i>Antedon mediterranea</i>	Feather star
<i>Alcyonium palmatum</i>		<i>Asterina gibbosa</i>	Sea star
<i>Calliactis parasitica</i>		<i>Astropecten</i> spp.	Sea star
<i>Condylactis aurantiaca</i>		<i>Peltaster placenta</i>	Sea star
<i>Leptogorgia</i> spp.		<i>Ophioderma longicaudum</i>	Sea urchin
		<i>Sphaerechinus granularis</i>	Sea urchin
		<i>Holothuria tubulosa</i>	Sea cucumber

The landscape looks promising for ducks (*Anatidae*) as the rich vegetation offers good breeding habitats. Garganey (*Anas querquedula*) was the most numerous, while Mallards (*Anas platyrhynchos*), Shovelers (*Anas dypeata*), Common teals (*Anas crecca*) and Mute swans (*Cygnus olor*) were present, but not showing breeding behavior. A rough estimation of the Black-winged stilts (*Himantopus himantopus*) suggested a population of about 80 breeding pairs in Semani delta (Tab. 11-4). The area with its dense vegetation, swampy marshland and numerous tamarisk shrubs offers suitable habitats for the Glossy ibis (*Plegadis falcinellus*). Various heron species (*Ardea*, *Egretta*) have been observed, but it is not likely that they breed there.

**Table 11- 3: Fish of the Semani -Povelça coast (Fieri).**

Scientific name	Common name	Albanian name	Remarks
<i>Dicentrarchus labrax</i>	European seabass	Levrek, Lavraku	most common
<i>Liza ramada</i>	Thinlip mullet	Qefulli i vjeshtës	
<i>Liza saliens</i>	Leaping mullet	Gasturi, Veshverdhi	
<i>Mugil cephalus</i>	Flathead mullet	Qefulli i verës	
<i>Oblada melanura</i>	Saddled seabream	Melanura, Spalca shalëzeze	
<i>Sardina pilchardus</i>	Pilchard	Sardelja, Bokfa	
<i>Sparus aurata</i>	Gilthead seabream	Kocja, Ullorja	no economical importance
<i>Aphanius</i> spp.	Mediterranean killifish, toothcarp	Çeliku	
<i>Atherina hepsetus</i>	Sand smelt	Aterina, Terina	
<i>Engraulis encrasicolus</i>	Anchovy	Açuga, Gavroja	
<i>Gobius bucchichi</i>	Bucchich's goby	Burdullaku	
<i>Sprattus sprattus</i>	Sprat	Papalina	

**Table 11- 4: Highest number of birds in the Semani Delta during the bird census in 1996 (Tempelman, 1998).**

Scientific name	Common name	Albanian name	Individuals observed
<i>Charadrius alexandrinus</i>	Kentish plover	Vrapuesi gushebardhe	78
<i>Egretta garzetta</i>	Little egret	Çafka e bardhe e vogel	30
<i>Himantopus himantopus</i>	Black-winged stilt	Kaloresi, Fisnikorja kembekuqe	160
<i>Philomachus pugnax</i>	Ruff	Luftetari	40
<i>Sterna albifrons</i>	Little tern	Dallendyshja e detit ballbardhë	115
<i>Tringa totanus</i>	Common redshank	Qyrylyku kembeqirize	60
<i>Vanellus vanellus</i>	Northern lapwing	Gicvilja, Cinja, Cingla	26

Despite the low number of breeding species, the area is of national importance for several bird species, like Kentish plover, Northern lapwing, Common teal and Black-winged stilt. Besides of breeding the site is attractive for waders and herons as a stopover site or a foraging area. The current value of the area becomes clearly apparent from its original structure and diversity in natural habitats.