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Preliminary notes on the geology of the Datça peninsula (SW Turkey)

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Geologia. — *Preliminary notes on the geology of the Datça peninsula (SW Turkey).* Nota di GIUSEPPE OROMBELLI, GIAN PAOLO LOZEJ e LUIGI ANGELO ROSSI, presentata (*) dal Socio A. DESIO.

RIASSUNTO. — Vengono esposti in forma preliminare i primi dati relativi agli studi geologici intrapresi nella penisola di Datça. Nella successione stratigrafica locale sono state per la prima volta distinte e datate diverse formazioni, dal basso all'alto così denominate: Calcare dello Yelimlik (Trias superiore? -Lias), Radiolarite di Şariabat (Giurassico medio–superiore?), Marna del Kuru Dağ (Giurassico superiore), Calcare Selcifero di Mandalya (Titonico–Maastrichtiano inferiore), Flysch di Datça (Maastrichtiano superiore–Eocene), « depositi fluvio–lacustri di facies levantina » (Pliocene), Tufo di Cesmeköy (Quaternario), depositi continentali quaternari. Nella penisola sono inoltre presenti vasti affioramenti di rocce ultrabasiche (peridotiti in prevalenza). Mediante studio micropaleontologico sono state riconosciute associazioni ad Alghe, Tintinnidi, Globotruncane e Nummuliti. Dal punto di vista tettonico la regione appare caratterizzata da strutture a pieghe, pieghe–faglie, faglie inverse e sovrascorrimenti, orientate grosso modo ENE–WSW e vergenti NNW, attribuibili ad una prima fase tettogenetica di probabile età oligocenica inferiore e da un reticolato di faglie normali, attribuibili ad una seconda fase, distensiva, pliocenica e post–pliocenica.

INTRODUCTION.

A detailed geological survey of the Peninsula of Datça was carried out during 1964–66 by the present authors on behalf of the Mineral Research and Exploration Institute of Turkey (Maden Tetkik ve Arama Enstitüsü), in accordance with agreements made between that Institute and the Institute of Geology of Milan University, directed by Prof. Ardito Desio.

The long and narrow Peninsula of Datça lies at the south western extremity of the Anatolian region and stretches out from east to west towards the Aegean Sea, between the Greek islands of Kos and Rodhos (fig. 1). It is about 65 km long, at its maximum 16.5 km wide and covers an area of about 500 km^2. The peninsula is predominantly mountainous, rising to 1162 m a.s.l., but interrupted in the middle by a narrow depression, known as the Isthmus of Datça.

The main village is Datça Iskele, which lies about 90 km from Marmaris, the nearest city. A rough road runs across the length of the peninsula, as far as the ruins of Knidos, situated at the western extremity.

The geology of this region has been briefly illustrated by Philippson (1915), E. Chaput (1936), Kaaden and Metz (1954) and by Kaaden (1960). In his geological map, at a scale of 1 : 300.000, the last-named author recognized the following units: *a*) " Schists of Karabörtlen " (probably Devonian),

(*) Nella seduta del 21 giugno 1967.

b) " Geosynclinal Mesozoic series ", *c*) " Flysch " (Paleogene), *d*) " Pliocene of Datça and volcanic tuffs ", *e*) " Ultrabasic rocks " (probably Devonian).

The neighbouring Greek islands of the Dodecanese have been examined by Desio (1931), with the exception of Rodhos; this last was studied by Orombelli and Pozzi (1967). In this note the results are reported of the authors'

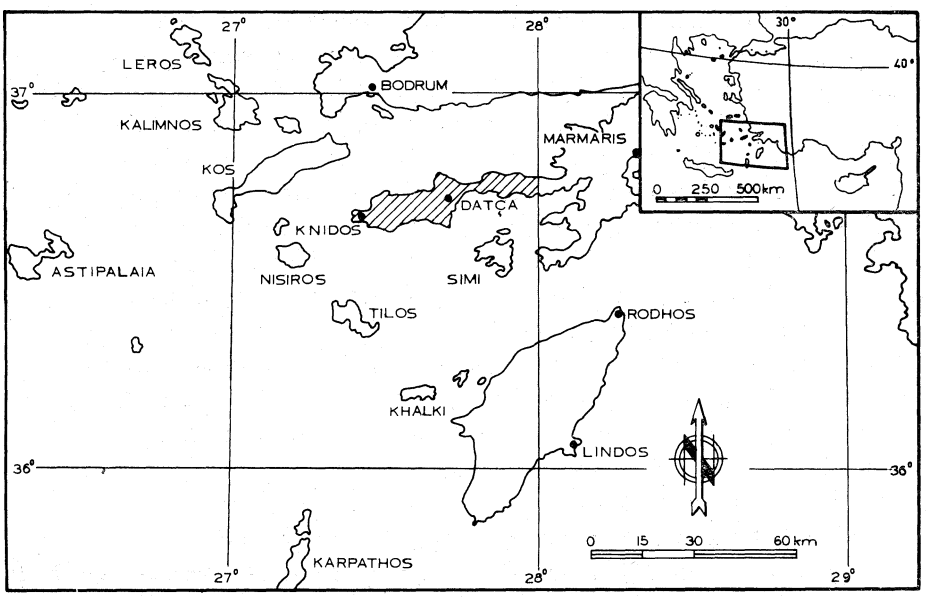

Fig. 1. – The Peninsula of Datça and the area surveyed.

preliminary research, carried out on the western part of the peninsula, which consists predominantly of calcareous rocks, while the eastern side is almost entirely made up of ultrabasic rocks.

THE STRATIGRAPHIC SEQUENCE.

The local stratigraphic sequence (fig. 2) was reconstructed on the basis of numerous sections measured and sampled; the formations mentioned in this note will be amply illustrated in a future work.

The following units have been recognized, in ascending order:

Yelimlik Limestone (Upper Triassic?—Liassic).

This formation, about 1700 m thick, consists of massive limestone and dolomite. Several different levels were distinguished. Dark grey or black, fetid, massive tectonic calcareous breccia, with angular fragments, crops out at the base. The cataclasis reached its maximum intensity in the lowermost part of this level, which consists of black, fetid, loose, mealy, friction breccia with very fine-grained fragments. The size of the fragments and the

degree of cohesion increase upwards, grading into brecciated limestone, recemented by white calcite veins. This level, about 170 m thick, is unfossiliferous. It is overlaid by light grey or light brown subcrystalline massive limestone, 480 m thick, with occasional signs of thick-bedding. Upwards follows grey to black massive dolomite, 420 m thick, at the top of which algal biolithite with *Palaeodasycladus mediterraneus* (Pia) [1], *Thaumatoporella parvovesiculifera* (Raineri), Gastropods and Pelecypods were found.

That level is in turn overlaid by grey massive limestone, 400 m thick, which is often characterized by biolithites and biomicrosparites with Stromatolites and Onkolites. The formation is topped by grey, thick-bedded, crystalline limestone, with scattered grey chert nodules. In this level, 230 m thick, fossiliferous intramicrosparite microfacies, with Echinoid, Pelecypod and Gastropod fragments and arenaceous Foraminifers were observed. Fossiliferous pelletiferous micrite with Echinoid fragments, pelagic Pelecypods, Ostracods, Sponge spicules, Radiolars and very rare *Globochaete alpina* Lomb. was observed near the boundary with the overlying formation.

The assemblage with *Palaeodasycladus mediterraneus* and *Thaumatoporella parvovesiculifera*, recently also found in Rodhos (Orombelli and Pozzi, 1967), is typical of the Liassic. *Globochaete alpina*, extremely common in the Upper Jurassic, is known as from the Liassic.

As the fossils mentioned have been found in the upper part of the formation, the Yelimlik Limestone can be assigned to the Upper Triassic—Liassic, in analogy with carbonate sequences described at Rodhos (Orombelli and Pozzi, 1967), and in the nearby district which lies between Fethiye and Antalya (Colin, 1962).

This formation corresponds (pro parte) to the "Mesozoischer massiger Kalkstein" of Philippson (1915).

Şariabat Radiolarite (Middle-Upper? Jurassic).

This formation conformably overlies the preceding one. It consists of dark red, yellowish-brown weathered, thin-bedded radiolarite, with intercalations of grey calcarenite and calcareous cherty breccia, and brown-yellow fissile marl interbeds. It is about 40 m thick. The Şariabat Radiolarite often presents lateral discontinuance and diminishing thickness, due to tectonic squeezing out. It the region to the west and north of Döşeme the radiolarite becomes banded dark grey and presents more frequent calcarenite intercalations.

In this formation were observed rich assemblages with Radiolars and fragments of Echinoids in the detrital intercalations. Owing to the lack of diagnostic fossils we have attributed the Şariabat Radiolarite to the Middle-Upper? Jurassic, on the basis of its stratigraphical position.

(1) To the same species probably belong the calcareous Algae found by Philippson (1915) in the talus pile, north of Yakaköy, and attributed by the same author to *Diplopora herculea* (Stoppani).

Kuru Daǧ Marl (Upper Jurassic).

This formation, about 70 m thick, conformably overlies the preceding one. It is made up of marl and marly limestone with scarce radiolarite intercalations. Within this formation three different levels were recognized.

The lower one, 30 m thick, consists of yellow-brown to red-violet, thin-bedded marly siliceous limestone, with Radiolars and arenaceous Foraminifers. Scarce radiolarite intercalations are present. The second level is made up of dark red, thin-bedded, fissile marl, to a thickness of 30 m, with very abundant Radiolars. The top level of the formation, 8 m thick, consists of reddish-brown, thin-bedded marly limestone with Radiolars and Aptychus, with intercalations of red radiolarite.

The characteristics described above are typical of the region immediately to the west of Datça. Further west the formation becomes thicker and the colour becomes prevalently yellow-brown, while intercalations of dark grey, thick-bedded calcarenite appear with a certain frequency.

The Kuru Daǧ Marl, owing to its stratigraphical position, can be attributed to the Upper Jurassic; however, no significant fossils were found therein.

Mandalya Cherty Limestone (Tithonian-Lower Maastrichtian).

Conformably overlies the preceding formation. It is made of grey to light brown, thin- to medium-bedded limestone and marly limestone, with abundance of nodules, lenses and layers of chert. Its thickness is about 480 m. levels, some fossiliferous, were observed in this formation. At the base, light Several green, thin- to medium-bedded marly limestone (clayey biomicrite and fossiliferous micrite) with lenses and layers of light grey chert were observed, in a thickness of about 90 m. An assemblage with Radiolars, Sponge spicules and *Stomiosphaera moluccana* Wanner was recognized in this level. *Stomiosphaera moluccana* is frequent in the Tithonian-Neocomian. Upwards follows a level, about 110 m thick, consisting of light grey, thin- to medium-bedded limestone (biomicrite and fossiliferous micrite) with lenses and layers of brown chert. Within the lower part of this level there were observed assemblages with Radiolars, *Calpionella elliptica* Cadisch, *Calpionellopsis oblonga* (Cadisch) and *Tintinnopsella carpathica* (Murg. and Filip.), which can be attributed to the Berriasian. In succession a level of light brown or grey, thin- to mediumbedded limestone (fossiliferous micrite and Radiolars biomicrite) with brown chert in nodules and layers, was observed in a thickness of about 80 m.

In the upper part of this level intercalations of grey graded calcarenite and calcirudite (biomicrite and biomicrudite) with *Orbitolina* were noted. Upwards follows a 90 m thick level of light brown, thin- to medium-bedded limestone (fossiliferous micrite) with pink chert layers and, at the top, frequent intercalations of grey, fetid, graded, thick-bedded calcarenite (biomicrite).

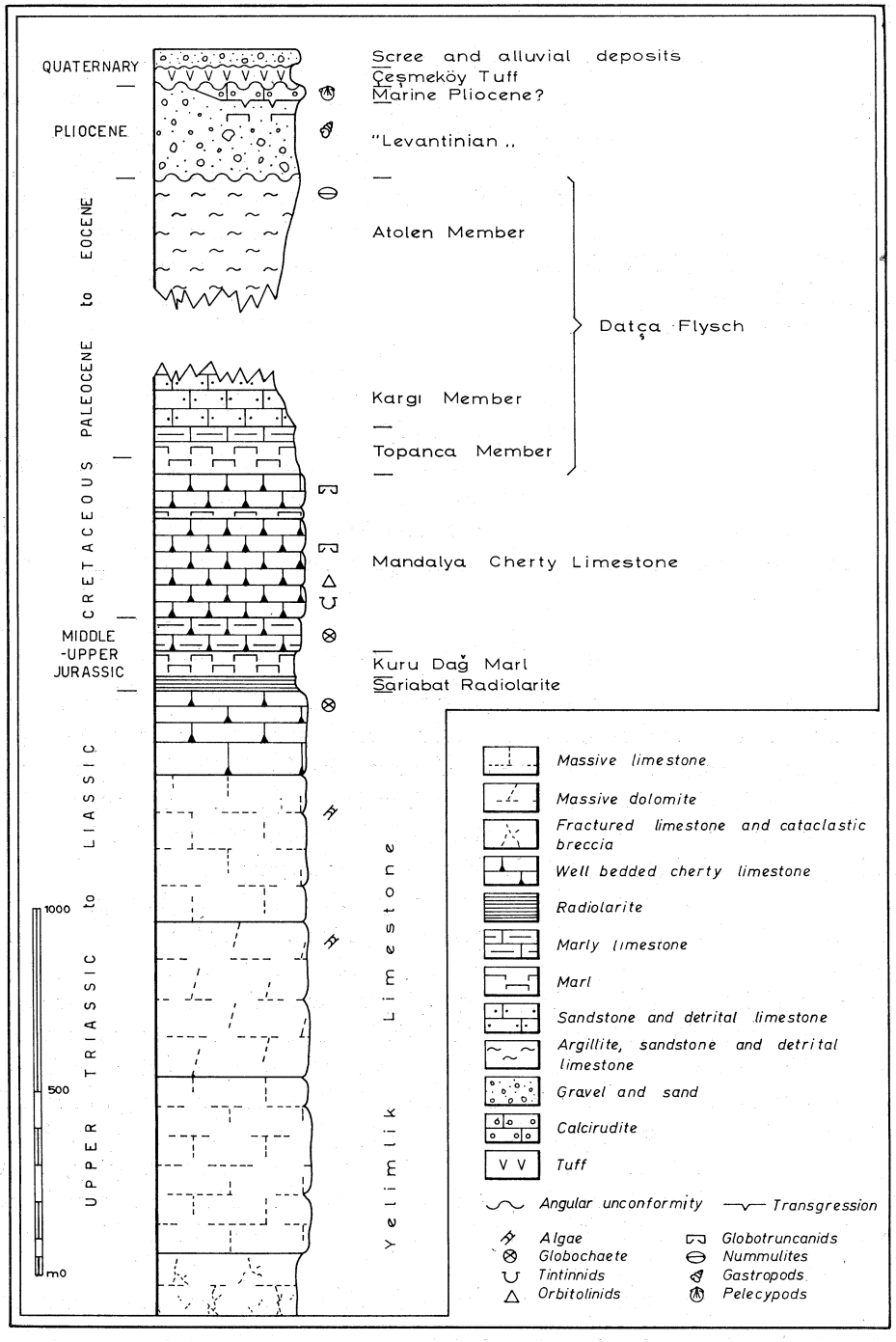

Fig. 2. – The stratigraphic sequence in the western part of the Datça peninsula.

An assemblage with *Rotalipora appenninica* (Renz), *Praeglobotruncana stephani* (Gandolfi), *P. stephani turbinata* (Reichel) and *Hedbergella* was observed in the micritic limestone. A 16 m thick intercalation of red, thin-bedded Radiolaria marl, with conchoidal fracture then follows. Finally, the top of the formation is made up of 95 m thick level, consisting of light grey-brown, thin– to medium-bedded, slightly marly limestone (clayey fossiliferous micrite), with rare pink chert lenses and intercalations of thick-bedded calcarenite. An assemblage with *Globotruncana stuarti* (de Lapp.), *G. lapparenti lapparenti* Brotzen, *G. lapparenti tricarinata* (Quereau), *G. arca* (Cushman) and *Heterohelicidae*, which can be attributed to the Lower Maastrichtian, was observed at this level, near the contact with the above-lying formation.

The Mandalya Cherty Limestone does not present notable lateral changes of facies in the region surveyed by us.

The microfaunas discovered permit us to date this formation fairly precisely, and attribute it to the Tithonian—Lower Maastrichtian.

The Mandalya Cherty Limestone corresponds (pro parte) to the "Mesozoischer geschichteter Kalkstein mit Hornstein (Olonoskalk)" of Philippson (1915). All the formations described until now correspond to the "Geosynclinal Mesozoic series" of Kaaden (1960) and to the "Mesozoic-Tertiary (Comprehensive Series)" of the "Denizli" sheet of the Geological Map of Turkey, 1 : 500.000, compiled by Pamir (1964).

Along the south coast of the peninsula, between Akçabuk Burmları and Kocaburun Tepe, numerous outliers consisting of well-bedded cherty limestones crop out, floating on top of the Flysch. Owing to some differences noted, we did not attribute these outcrops to the Mandalya Cherty Limestone. Numerous faults and thrusts, a complicated fold structure and the monotonous rock types do not permit the reconstruction of a definite stratigraphical succession. However, the field observations and the study of the microfacies lead us to accept the following sequence of levels, from the top downwards:

d) light grey, medium– to thick-bedded limestone (fossiliferous micrite) with chert layers and nodules, about 100 m thick;

c) dark red, thin-bedded radiolarite, about 40 m thick;

b) blue-grey, medium– to thick-bedded limestone (fossiliferous micrite and biomicrite) with chert lenses and layers, about 100 m thick;

a) dark grey, greenish weathered, thin-bedded limestone (fossiliferous micrite), alternated with green thin-bedded mudstone, in a thickness of about 20 m. In this level typical microfacies with pelagic Pelecypods was observed, very similar to that of the Carnian thin-bedded *Halobia* chert and limestone, of Pindus facies, found in Rodhos (Orombelli and Pozzi, 1967).

All the thicknesses given above are roughly approximate.

This sequence shows great similarity to the sediments of Pindus facies outcropping on the island of Rodhos (Profitis Ilias Group of Orombelli and Pozzi, 1967), attributed to the Upper Triassic—Cretaceous.

Datça Flysch (Upper Maastrichtian-Eocene).

We have attributed all the clastic deposits cropping out on the peninsula, unconformably overlain by the "Levantinian" continental deposits (Pliocene) to the Datça Flysch.

Three members were distinguished and named, in ascending order, Topanca Member, Kargı Member and Atolen Member. Of these, the first two were observed superimposed in conformable sequence on the Mandalya Cherty Limestone. The third one belongs to a lower structural unit, overthrust by the Mesozoic sequence. We have placed the Atolen Member at the top of the Datça Flysch on the basis of chronostratigraphic observations, but it might belong to a different stratigraphic and paleogeographic unit.

The Topanca Member conformably overlies the Mandalya Cherty Limestone. It consists of thin-bedded marly limestone and marl, with intercalations of calcarenite thick beds. Thickness about 130 m. Different levels were recognized in this member. At the base, brown, green weathered, thin-bedded fissile marl, with intercalations of brown-grey, thick-bedded arenaceous calcarenite were observed, in a thickness of about 45 m. A very rare arenaceous Foraminifers assemblage was identified in the marl. This is overlain by grey, greenish-yellow weathered, thin-bedded, splintery marly limestone with intercalations of dark grey, thick-bedded arenaceous calcarenite, in a thickness of about 70 m. At the top of this member dark grey, thick-bedded arenaceous calcarenite and calcareous cherty breccia, 20 m thick, are to be found.

This member is particularly well developed in the region immediately to the SW of Datça, and in general in the most southerly areas of the peninsula. In the more northerly outcrops the Topanca Member appears in a reduced thickness and characterized by a larger number of coarse detrital intercalations.

The Kargı Member conformably overlies the preceding one. It is composed of well bedded, olive-grey, reddish-brown weathered, lithic sandstone, with intercalations of thick-bedded calcareous cherty breccia.

The lower boundary of this member is marked by one slump unit, about 3 m thick, made up of a paraconglomerate with subangular fragments of cherty limestone and chert, in a muddy matrix. The upper boundary cannot be identified in the region surveyed. The outcrops observed show a maximum thickness of about 100 m.

The Atolen Member, as has been previously recorded, belongs to a lower structural unit, and is not joined to the preceding member by any stratigraphical continuity. Its base contact is not exposed. For chronostratigraphic reasons, we suppose that this member might represent the upper portion of the formation. The Atolen Member consists of dark brown to black, yellowish-brown weathered, splintery slates, of grey-green subgraywackes and of dark grey calcarenites. These lithotypes constitute a chaotic complex, whose thickness is difficult to estimate, and in which exotic blocks of ultra-

basic rocks and of crystalline limestones are to be found. The whole complex has undergone a weak epizonal metamorphism.

Assemblages with Nummulites, Alveolinids, *Operculina*, Discorbids and *Melobesiae*, within calcarenite levels, have been found in the outcrops of Murdala, Mersincik and Kara Br., along the northern coast of the peninsula.

No significant fossiliferous levels were found in the Topanca and Kargı Members, however the sedimentation of the Datça Flysch had to commences during the Maastrichtian, as Lower Maastrichtian *Globotruncana* assemblages were observed in the layer immediately underneath. As has been stated, the Atolen Member contains Nummulites assemblages which can be attributed to the Eocene.

The Datça Flysch corresponds (pro parte) to Philippson's "Mesozoischer Schiefer". The slates which we assigned to the Atolen Member were attributed by Kaaden and Metz (1954) and by Kaaden (1960) to the " Çetibellköy series ", belonging to the " Schists of Karabörtlen " (probably Devonian).

The same authors considered as Paleogene Flysch the deposits which we attributed to the Topanca and Kargı Members.

Fluvio-lacustrine Pliocene deposits (" *Levantinian* ").

These crop out principally in the Isthmus of Datça and in the Domuzçukuru region. They overlay the preceding formations and the ultrabasic rocks in angular unconformity. They consist of conglomerates, sandstones, sands, marls and clays. The maximum thickness measured was about 160 m.

In the Isthmus of Datça this unit is made up of medium– to thick-bedded conglomerates with peridotite, radiolarite and limestone pebbles, in a sandy matrix with calcareous cement, of brown to olive-grey sandstones and sands, made of fragments from the same rock types mentioned, of pink, light brown or green-grey marls and clays. Cross-bedding structures are present. Sands and marls are often fossiliferous with *Melanopsis*, *Viviparus*, *Theodoxus*, *Unio*, etc. Conglomerates are predominant in the Domuzçukuru region. On the hills surrounding the isthmus, conglomerates with pitted limestone pebbles in calcareous cement crop out, up to a height of about 250 m; higher up, as far as about 370 m a.s.l., deposits of loose, well rounded, predominantly limestone pebbles can be observed. A level of white calcirudite and calcarenite with *Ostrea*, *Pinna* and Corals, covered by sand with *Cerastoderma edulis* (L.) and then by unfossiliferous gravel and pebbles, the whole about 6 m thick, crops out at the top of the continental Pliocene sequence, in the NW region of the isthmus, near the Yıldırımli locality. This level bears witness to a short episode of marine sedimentation, which in the absence of more precise paleontological data, we believe to be more or less contemporaneus with the Upper Pliocene marine transgression observed in the nearby Island of Rodhos, above the " Levantinian " deposits (Orombelli and Montanari, 1967).

The Pliocene deposits of the Isthmus of Datça are indicated as " marine Pliocene " in the maps of Philippson (1915) and of Pamir (1964). Tintant

(1954) and Chaput G. (1955), who have studied the micro– and megafaunas respectively, believe that these deposits were formed in a predominantly brackish lagoonal environment. In our opinion the Pliocene deposits of Datça were almost exclusively formed in continental, fluvial (pebbles and conglomerates cropping out on the hills surrounding the isthmus up to a height of about 370 m and the greater part of the coarse clastic deposits of the isthmus), fluvio-lacustrine (sands, marls and clays with *Viviparus*, *Theodoxus*, *Unio* etc.) and transitional lagoonal environment (sands and marls with *Cerastoderma*).

Solely the calcarenite and calcirudite with Corals, *Ostrea*, etc., at the top of these deposits are evidence of a certain marine transgression of brief duration, rapidly concluded, through a lagoonal episode (*Cerastoderma* sand) by a definitive emersion (afossiliferous gravel and pebbles).

Çeşmeköy Tuff (Quaternary).

Pyroclastic deposits of limited thickness and extension, consisting of tuffs and lapilli tuffs, often with numerous accessory volcanic and accidental sedimentary ejecta, crop out in the lowlands of the peninsula. They lie unconformably on the above described formations and are sometimes covered at the top by ancient fanglomerate or alluvium. They are vitric tuffs, seemingly rhyolitic, made up of ashes, lapilli and, lesser, blocks with a pumiceous texture. The thickness of these deposits varies from place to place, according to the morphology of the bedrock, and is between about 20–40 m.

From east to west this formation shows some lateral gradational changes: from white the colour becomes pale yellow, then grey and dark grey near Knidos; the size of the pyroclasts increases, passing from fine ash to coarse ash, then to lapilli and to blocks; the accessory and accidental ejecta, absent in the eastern outcrops, become more and more frequent towards the west, at the same time increasing in size. They are generally made up of volcanic rocks of andesitic type and, much rare, of crystalline limestones.

The increasing size of the pyroclasts from east to west, confirms the origin of these deposits from the nearby volcanic Island of Nisiros, to the WSW of the Datça peninsula, as already believed by Philippson (1915). The rhyolitic tuffs of Nisiros and of Jali, with which those of Datça may be correlated, were attributed to the Upper Quaternary by Desio (1931).

The local stratigraphic sequence in the Peninsula of Datça is completed at the top by ancient fanglomerate and by recent loose alluvium and scree.

Ultrabasic rocks.

Ultrabasic rocks form almost the whole eastern part of the peninsula; in the west they only crop out in the Kızıl Dağ region.

They are made up prevalently of peridotite of harzburgitic type.

They are found in tectonic contact with the pre-Pliocene formations and are covered unconformably by the "Levantinian" conglomerates.

The peridotite is found often partially serpentinized near the tectonic contacts. Dark red radiolarite often joins with the ultrabasic rocks.

Kaaden and Metz (1954) attribute the SW Anatolian peridotites to the Paleozoic, but according to Holzer and Colin (1957) and Colin (1962) their age should be between the Upper Jurassic and the Lower Cretaceous.

In conclusion, the stratigraphy of the western half of the Datça peninsula appears to be characterized by a sequence of sediments, about 3000 m thick, continuous from the Upper Triassic to the Eocene, on which predominantly continental Pliocene deposits, tuffs and continental Quaternary deposits lie unconformably.

STRUCTURAL FEATURES.

From the structural point of view, the region is characterized by folds, thrust faults and overthrusts, generally with an ENE–WSW trend and with a NNW overturn. All the pre-Pliocene formations have been involved in these structures. The most important and characteristic are the Yarik Dağ break thrust, the Murdala-Mersincik-Kara Br. overthrust and the outliers of the south coast.

In the Yarik Dağ region is a large asymmetrical anticline, whose axial plane dips to SE, and whose axis trends NE, with slight north–eastward plunge. Along the crest and along the SE limb the Yelimlik Limestone crops out, slightly dipping to the SE. Along the NW limb the Mandalya Cherty Limestone and the conformably overlying Datça Flysch crop out. These units dip NW about 70°, and are thrust over the Atolen Member, in a low-angle southeastward dipping plane.

On the mountain range along the northern coast the Yelimlik Limestone, the Şariabat Radiolarite, the Kuru Dağ Marl and the Mandalya Cherty Limestone crop out in conformable homocline sequence. The strata strike NNE and dip SSE, at an increasing slope from north to south. Along the northern coast, in the Murdala, Mersincik and Kara Br. regions, it can be seen how this sequence is thrust over the Atolen Member of the Datça Flysch. The overthrust plane is subhorizontal or slightly dipping to the north. The Yelimlik Limestone appears intensely fractured and very often reduced to a crush breccia near the tectonic contact with the Flysch.

The southern region is characterized by the presence of numerous outliers made up of cherty limestones and radiolarite, thrust over the Flysch.

Overthrust planes generally dip towards the south.

Finally a network of Pliocene and post-Pliocene normal faults crosses the whole peninsula. The principal fault trends are NE–SW or ENE–WSW, and WNW–ESE.

Among the main faults are those which bound the " Levantinian " outcrops of the Datça isthmus, trending WNW, and those which border the south east slope of the Kara Dağ, which trend NE and put the Yelimlik Limestone and the Mandalya Cherty Limestone into contact with the Datça Flysch.

PALEOGEOGRAPHICAL OBSERVATIONS.

Orombelli and Pozzi (1967) attributed the stratigraphical sequence observed in the Peninsula of Datça to the Knidos Zone, a new transitional paleogeographical unit connecting the external border of the Menderes Massif (homologous to the Pelagonian Zone) with the Pindus Furrow. The Knidos Zone is characterized by a carbonate shallow water sedimentation during the Upper Triassic to the Liassic, changing through emphasized subsidence into pelagic siliceous-carbonate deep water sedimentation during the Middle-Upper Jurassic.

From the Middle-Upper Jurassic to the Eocene the Knidos Zone takes part in the evolution of the Pindus Furrow: the Kuru Dağ Marl records a first partially terrigenous episode in the Upper Jurassic while the Mandalya Cherty Limestone (Tithonian-Lower Maastrichtian) testifies to the restoration of the typical pindic pelagic environment; finally the commencement of the Datça Flysch sedimentation (Upper Maastrichtian) is contemporaneous with that of the Pindus (second) Flysch.

The main tectogenetic phase cannot be dated with precision in this region. However the presence in the Marmaris neighbourhood of conglomerates with large ophiolitic pebbles (2) which can be correlated with the Middle-Upper Oligocene Thari Formation, cropping out in the Island of Rodhos and there lying transgressively and unconformably on the flysch, leads us to believe that this phase took place during the Upper Eocene-Lower Oligocene.

The Miocene is lacking in the Datça peninsula, as in Rodhos, Tilos and Simi, while the Pliocene is greatly developed, essentially in the " levantinian " facies. Numerous Pliocene and post-Pliocene normal faults, many of which of morphogenetic importance had a determining influence on the present physiographic relief of the region. The Quaternary tuffs, fanglomerates and alluvium conclude the local geological and geomorphic history.

In this paper we wished to give a summary geological description of the Datça peninsula; we intend to resume this theme in a future more complete work, when the paleontologic and petrographic research, actually taking place, is terminated.

(2) These conglomerates crop out along the northern coast of Hisarönü Körfezi, where the peninsula joins the continent. They overlie the ultrabasic rocks, with which they are often in contact by normal faults. In Pamir's 1 : 500.000 geological map they are attributed to the continental Pliocene.

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