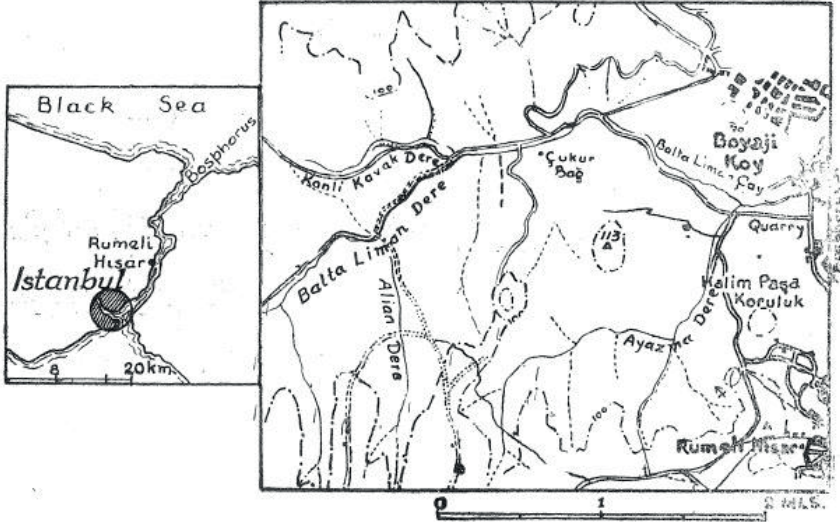


## Baltalimanında Trakya Grovıkları

*W. J. McCALLIEN*

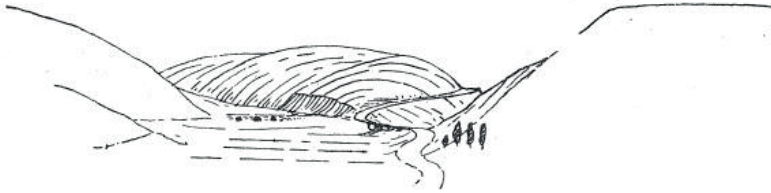
Boğaziçinde Baltalimanında taş ocakları Altdevon kalkerini işlerler. Bu kalker üzerinde ince tabakalı sileks ve onun üstündede Devon Trakya Grovıkları bulunur. Baltalimanı ve Kanlı Kavak vadilerinde bu grovıklar gayet vazih bir surette görülmektedir. İki numaralı şekilde gösterilen yüksek arazi sathı bir miktar Neojenin istisnasiyle hep grovaktan müteşekkildir. Şehrin birçok yerlerinde grovak gösterilerine tesadüf edilmekle beraber grovıkların sedimanter veçhesini en güzel gösteren yer Baltalimanındadır. Baltalimanı ve Kanlı kavak vadilerine girildiği yerden doğuya doğru sert meyiller gösteren kırıklık zonları bulunur. Tabakalanma, şistilik (cleavage) meyilleri bariz bir surette görünür. Bu meyiller killi kısımlarda hafif, kumlu kısımlarda serttir; ve bu suretle civardaki eski taş ocaklarında görüldüğü gibi bazan merdiven manzarası arzederler. Taze satırlar açık kurşunî (yavru ağzı, fawn) renkte iseler de havaya maruz kaldıkça esmerleşir ve ekseriya pirit dekompozisyonu benekleri gösterirler. Bu ince tabakalı seri altında hiçbir Strüktür göstermiyen masif grovıklar bulunur. Bunların batısında değişen meyiller, antiklinal ve senklinaller ve grovıkların mümeyyiz vasfı olan «graded bedding», «slip bedding» karışık iltivalar, breşler ve aşınma strüktürler! müşahede edilebilir. İşte bu noktada 3 numaralı kroki tersim edilmiştir. Baltalimanından şimalde tepeyi aşarak Kanlı kavak vadisine geçildikte esas yola gelinerek aynı teşekküller tekrar müşahede edilebilir.

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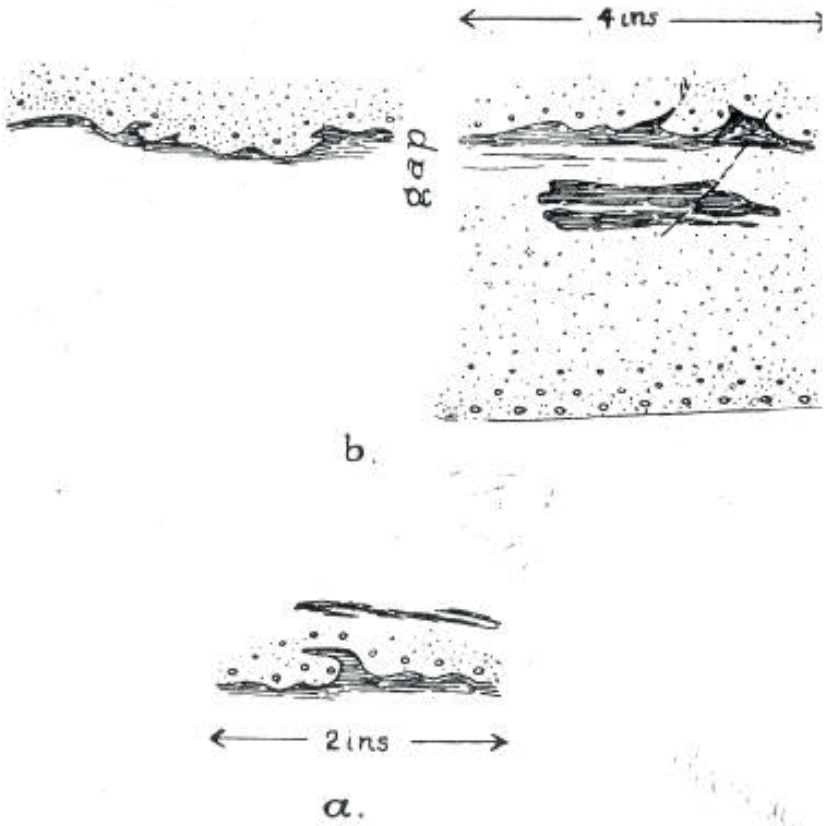
Şek. 1 Baltaliman Bölgesinin Krokisi.

Fig. 1 Sketch maps showing the locality dealt with.

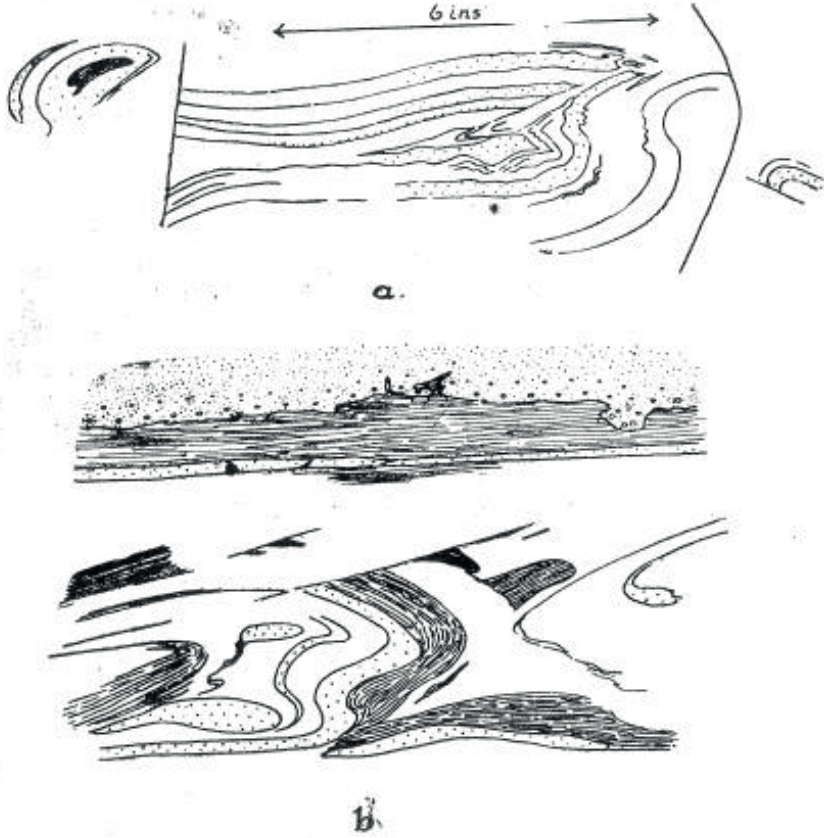


Şek. 2 Yukarı Baltaliman vadisinden Bentlere doğru batıya bakış.

Fig. 2 View of upper

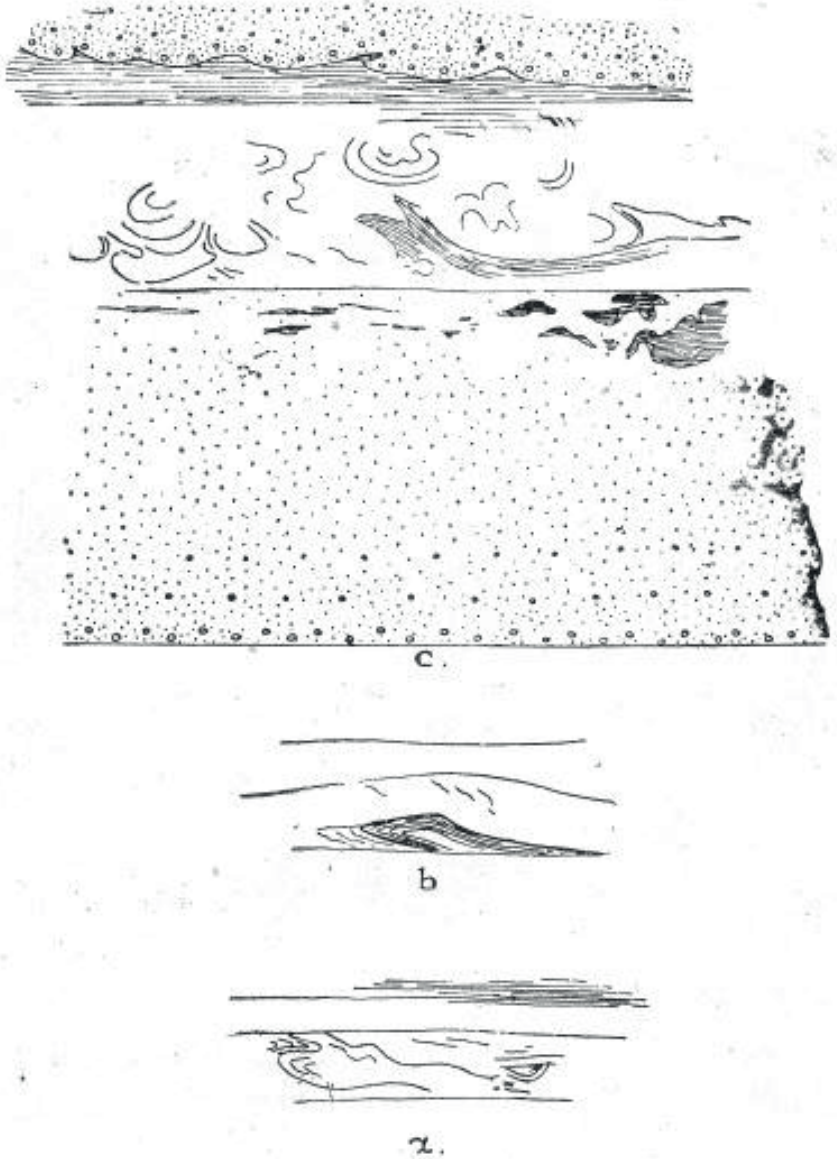


Şek. 3 Yukarı Baltaliman vadisinde görünen grovak strüktürleri.  
Fig. 3 Sketches of greywacke structures in upper Baltaliman Valley.



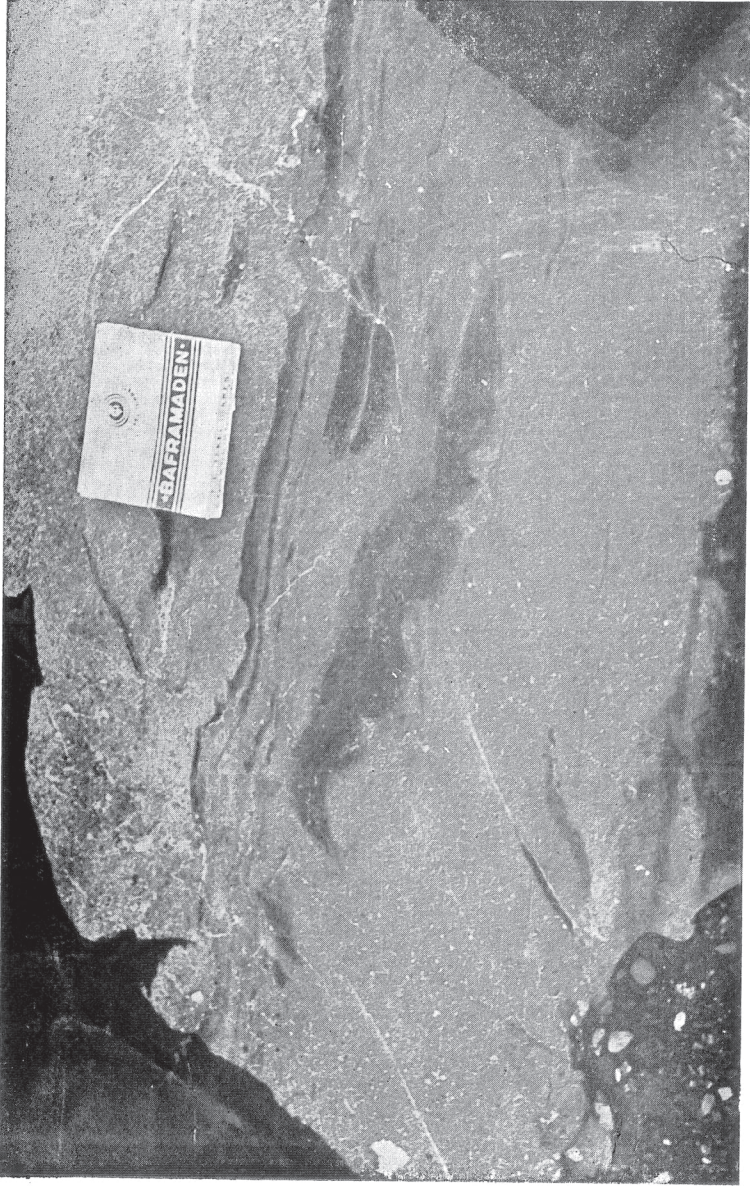
Şek. 4 a, b. Yukarı Baltaliman vadisinde görünen grovak strüktürleri.

Fig. 4 a, b. Sketches of greywacke structures in upper Baltaliman Valley.



Şek. 5 Yukarı Baltaliman şimalinde Kanlı Kavak vadisinde görünen grovak türleri

Fig. 5 Sketches of greywacke structures in Kanlı Kavak Valley, north of upper Baltaliman Valley.



Levha I» BaıtaÜman Gro va Harındaki Stüktür detayları,  
Plate L Detail of Greywacke Structures in BaltaKmao  
Valley



## The Thracian Greywackes of Baltaliman Valley near Rumeli Hisar on the Bosphorus

W. J. McCALLIEN

*Summary: Attention is drawn to the excellent section of graded bedding and slump bedding in Baltaliman Valley north of İstanbul. The structures occur in the Thracian greywackes of Devonian age and can be seen in other regions but the accompanying notes and illustration are restricted to Baltaliman Valley.*

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Baltaliman Valley opens into the Bosphorus immediately south of the small village of Mirgun. In its lower part the valley is broad and flat-bottomed and cut into massive limestone of lower Devonian age. The limestones are quarried in the core of a great anticline flanked to the south-east and north-west by well bedded nodular limestones. Further upstream the valley changes its character somewhat and becomes winding. Limestone outcrops have been quarried in the past at various localities west of the main quarry. They represent repetition by folding of the main limestone. The Devonian subdivisions above the main limestone form an easily recognisable infold just to the south of the conspicuous spur west of the first tributary valley on the south and before reaching the road leading over the hill to Mirgun. In this fold the nodular limestones are followed by thin-bedded cherts (the Kieselschiefer of Paeckelnann) and these in turn by shaly beds of the greywacke series. At the next limestone quarry on the western side of the spur just mentioned, the road crosses the stream and is joined by the road to Mirgun at an exposure of highly folded and cleaved cherts. From this point westward the road follows the bottom of the valley for some distance. Looking westward along this road one sees the valley split into two branches as indicated in fig. 1. The present note deals with the section in these two valleys in which there are excellent exposures of the Thracian Greywackes. The left hand valley in the sketch is the continuation of Baltaliman. The main road follows the other valley (Kanlı Kavak Valley). At the entrance to the upper part of Baltaliman there are the ruins of an aqueduct and at the entrance to Kanlı Kavak is a small road-bridge. The locality, therefore is easy to find. All the high ground shown in the sketch (fig. 2) is composed of greywackes, apart from some superficial Neogene. They have been well-named the Thracian Series because they form



the whole peneplain of the parts of Thrace from Istanbul to the north and north-north-west. Excellent exposures occur in the city itself and in all the deep valleys in the neighbourhood, but the Baltaliman sections are the best the writer has so far seen illustrating the typical sedimentary features of the greywackes. Poorer examples of the same structures were noted by the roadside at the Technical University but they are now badly exposed and difficult to study.

At the entrance to both upper Baltaliman and Kanlı Kavak valleys the rocks are flags and slates with gently rolling dips and crossed by shatter belts which usually dip steeply towards the east. In Baltaliman Valley the flags dip north-westward near the entrance to the gorge and then dip north-eastward. The bedding is often strikingly emphasised by the cleavage dips, gentle in the argillaceous beds and steeper in the silty and sandy layers. On the great joint surfaces this gives a staircase effect bringing out the flaggy nature of the rocks. In general, the cleavage dips eastward and north-eastward. Some of the silty layers have current bedding and some have graded bedding. Everywhere they are right way up. A path runs along the northern side of the valley and the cliffs, and old quarries afford excellent sections. The fresh rocks are fawn in colour but they weather dark and are often stained by decomposed pyrites. Just west of the entrance to this upper part of the valley the flags are underlain by massive grits or greywackes apparently devoid of structures.

Westward from the massive greywackes just mentioned, the dips are highly variable both in amount and in direction and at least two synclines and an anticline are crossed before reaching the next road-bridge. On the whole the rocks are slaty rather than gritty but a number of strong bands occur and in these graded bedding may be found. Just before reaching the bridge and the two little houses at it, good cross sections in steep and vertical beds are exposed in the bed of the stream. In these many of the structures so typical of greywackes are well seen: graded bedding, slip-bedding and complex sedimentary folding, slatebreccias, erosion and perhaps eddy structures. It was at this point that the structures shown in Fig. 3 were sketched. Fig. 3, a, b, and fig. 4, a, b, show the nature of the graded bedding and erosion tops of the beds, and also the complex folding associated with them. Similar rocks continue for long distances beyond this old bridge but the present account is restricted to the lower stretch of the valley.

From Baltaliman valley it is easy to cross the bridge to the north and

rejoin the mainroad and then continue down into Kanlı Kavak valley where almost continuous sections of the same rocks are again exposed. By the roadside also, it is possible to examine the rocks, but the sedimentary structures are difficult to find. The main folding and cleavage (dipping north-eastward) are, however, well displayed on the road. The rocks in general have a phyllitic aspect and in places are weathered into a bright red colour.

In the valley bottom, below a large porphyritic andesite intrusion, the rocks are similar to those of upper Baltaliman valley; slates, flaggy dark and light beds, and thick grits. There are some old quarries and many sections showing the same structures we have already noted. The silty bands have often current-bedding in some cases and contorted bedding in others. Fig. 5, a, b, c are sketches from Kanlı Kavak valley. Fig 5, a, b, show the contortions in the thin silty beds. Downstream from the large andesite there is a conspicuous cliff section in thick-bedded grits with thinner argillaceous layers dipping downstream. The grits have graded bedding and the argillaceous layers show the most complicated foldings. One of the most, complex of these occurs just above eye level and an attempt to illustrate it free-hand is given in Fig. 5 c.

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