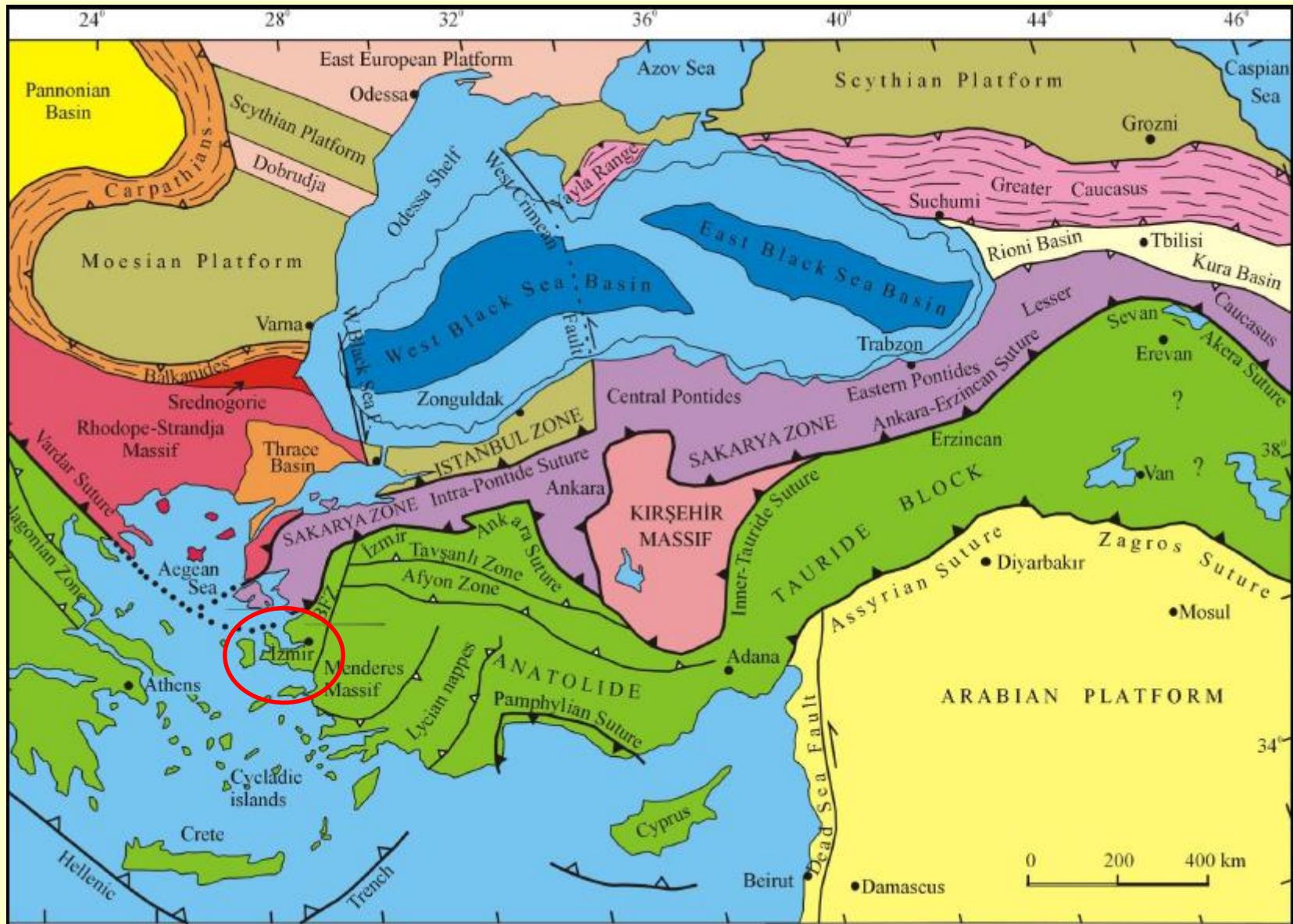


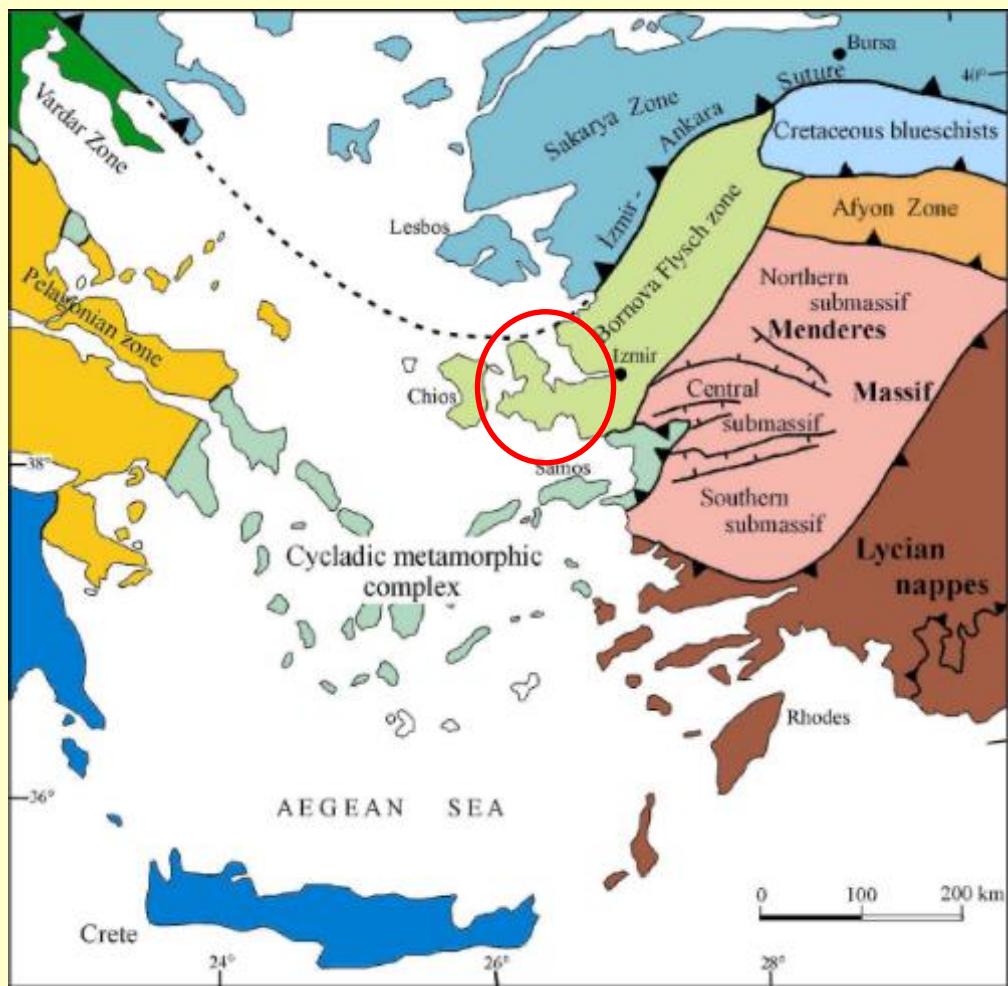
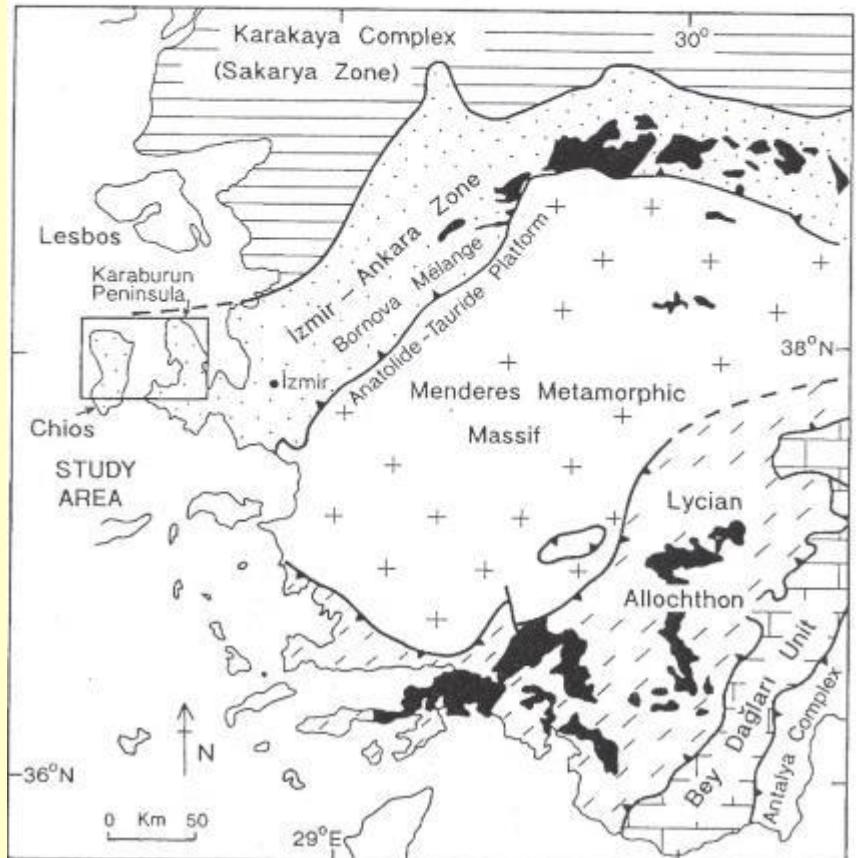
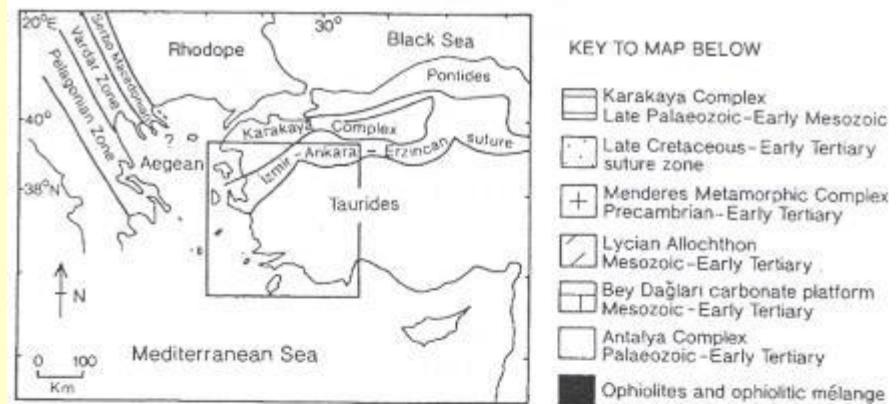
TARİHSEL VE TÜRKİYE JEOLOJİSİ

KARABURUN
YARIMADASI'NIN
STRATİGRAFİSİ VE
TARİHSEL JEOLOJİSİ

Prof. Dr. Funda Akgün, Prof. Dr. Bilal Sarı ve Dr. Ögr. Ü. İsmail İşintek

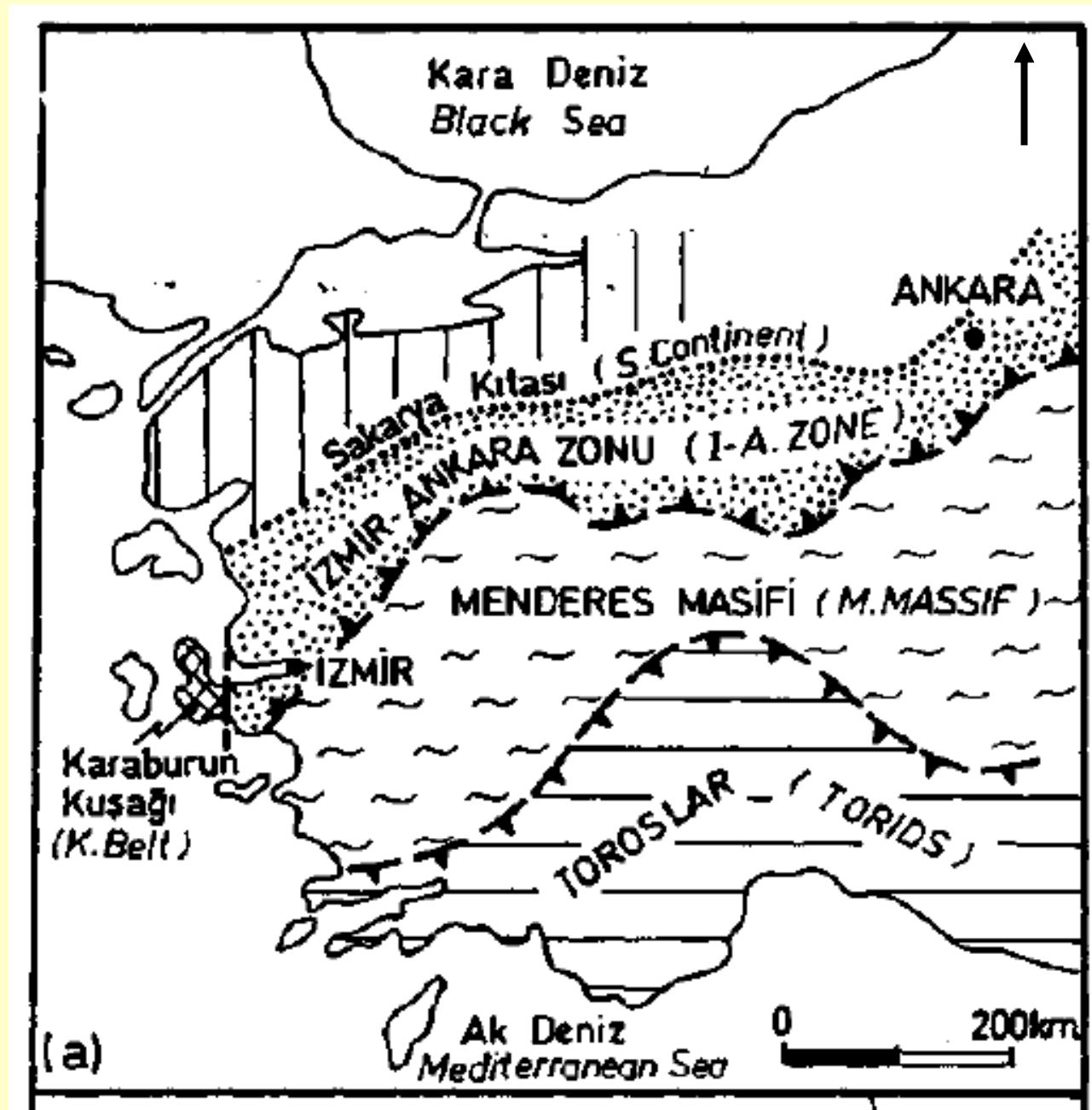


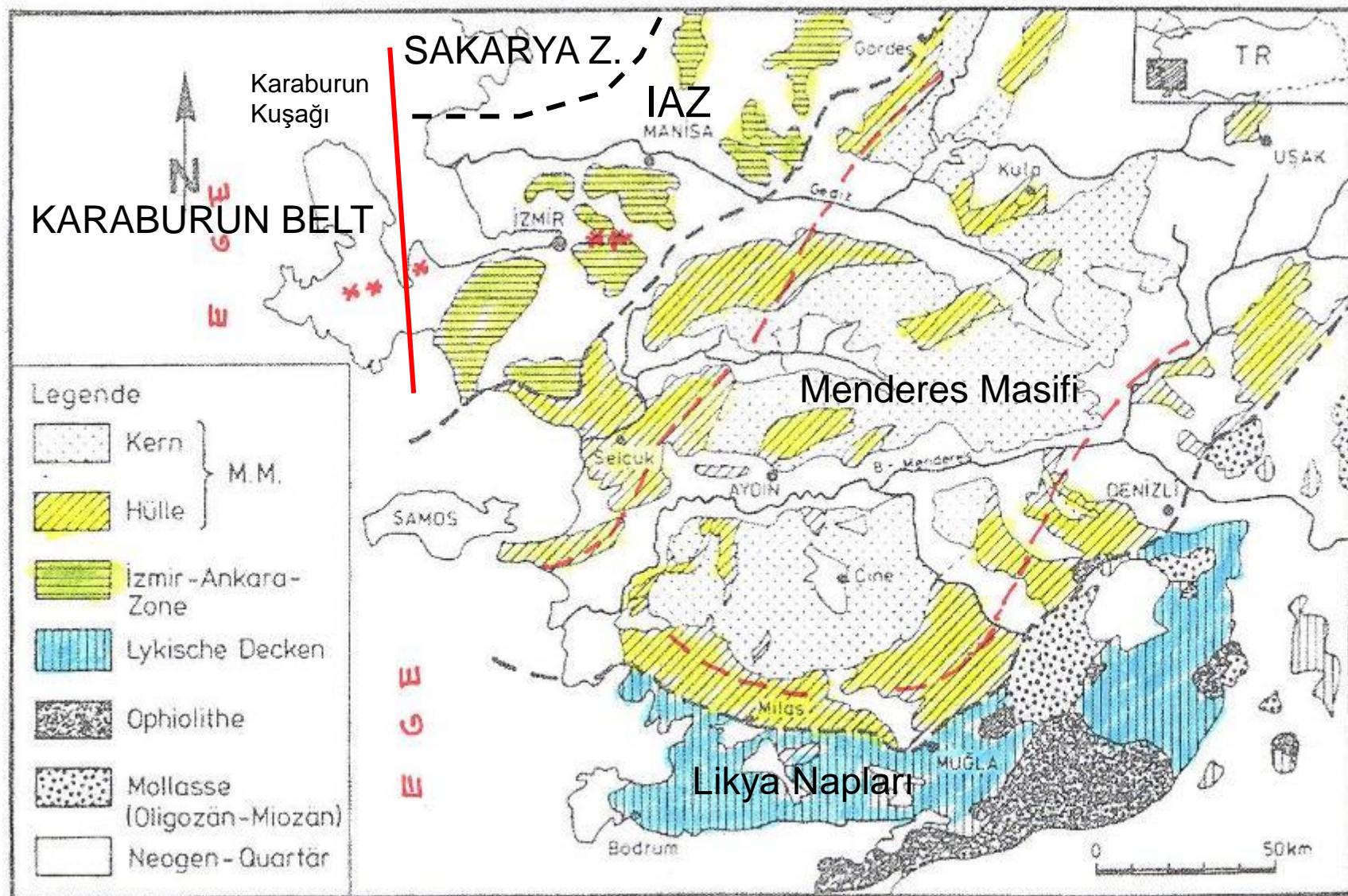
Okay & Tüysüz, 1999



Okay & Tüysüz, 1999

Okay & Siyako, 1991



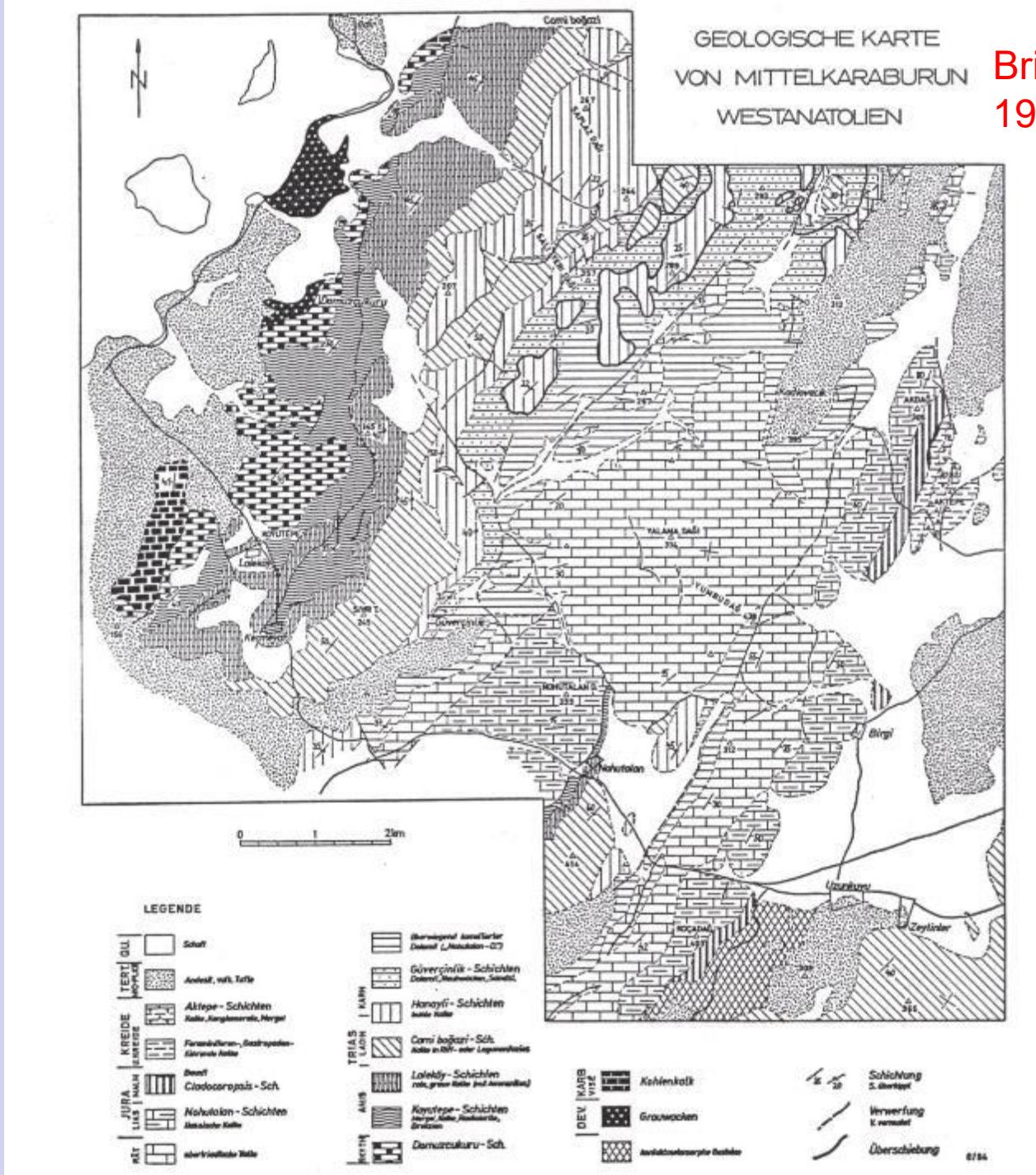


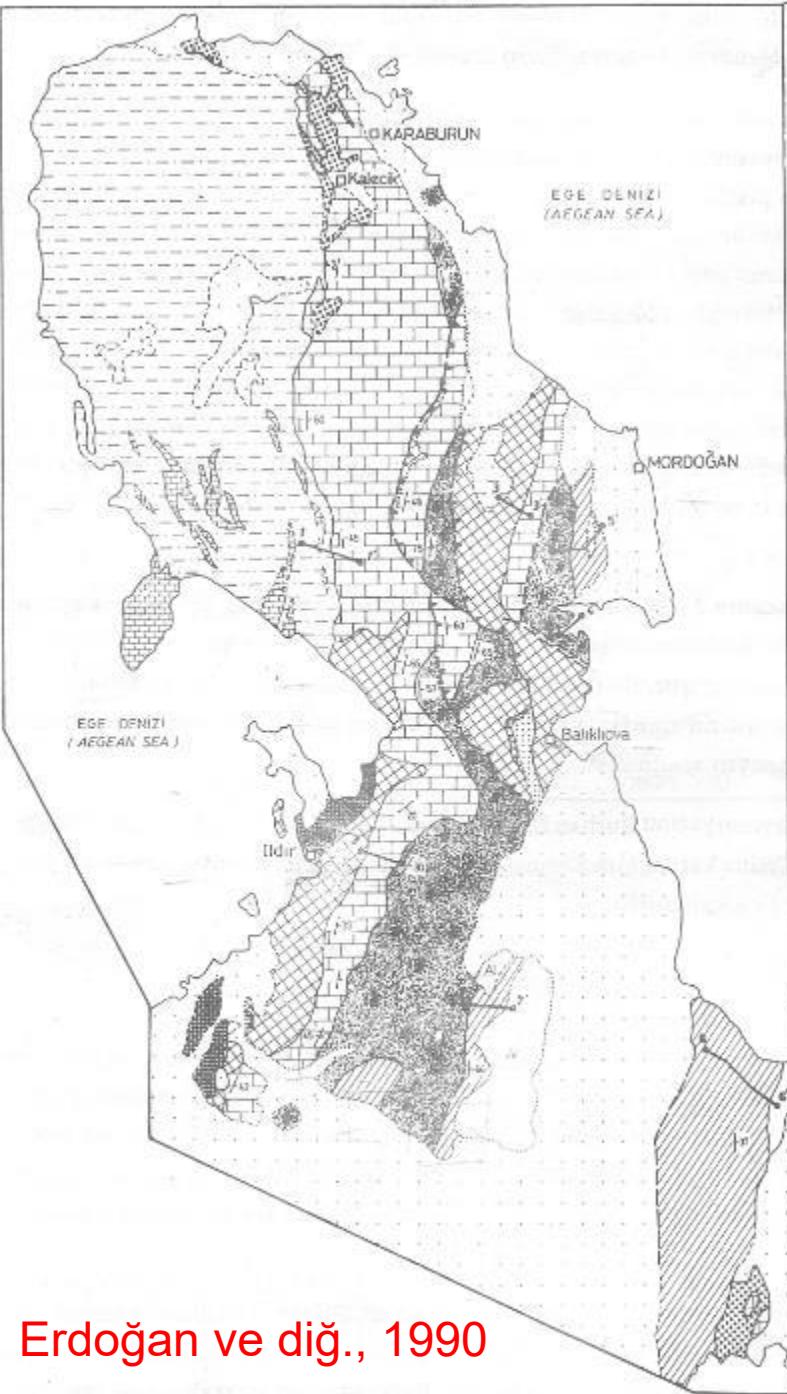
Yıldız (1987)'den

Abb. 1 Geologische Karte des Menderes-Massivs und seiner Umgebung (vereinfacht nach Dürr, 1977)

Brinkmann ve diğ.,
1972

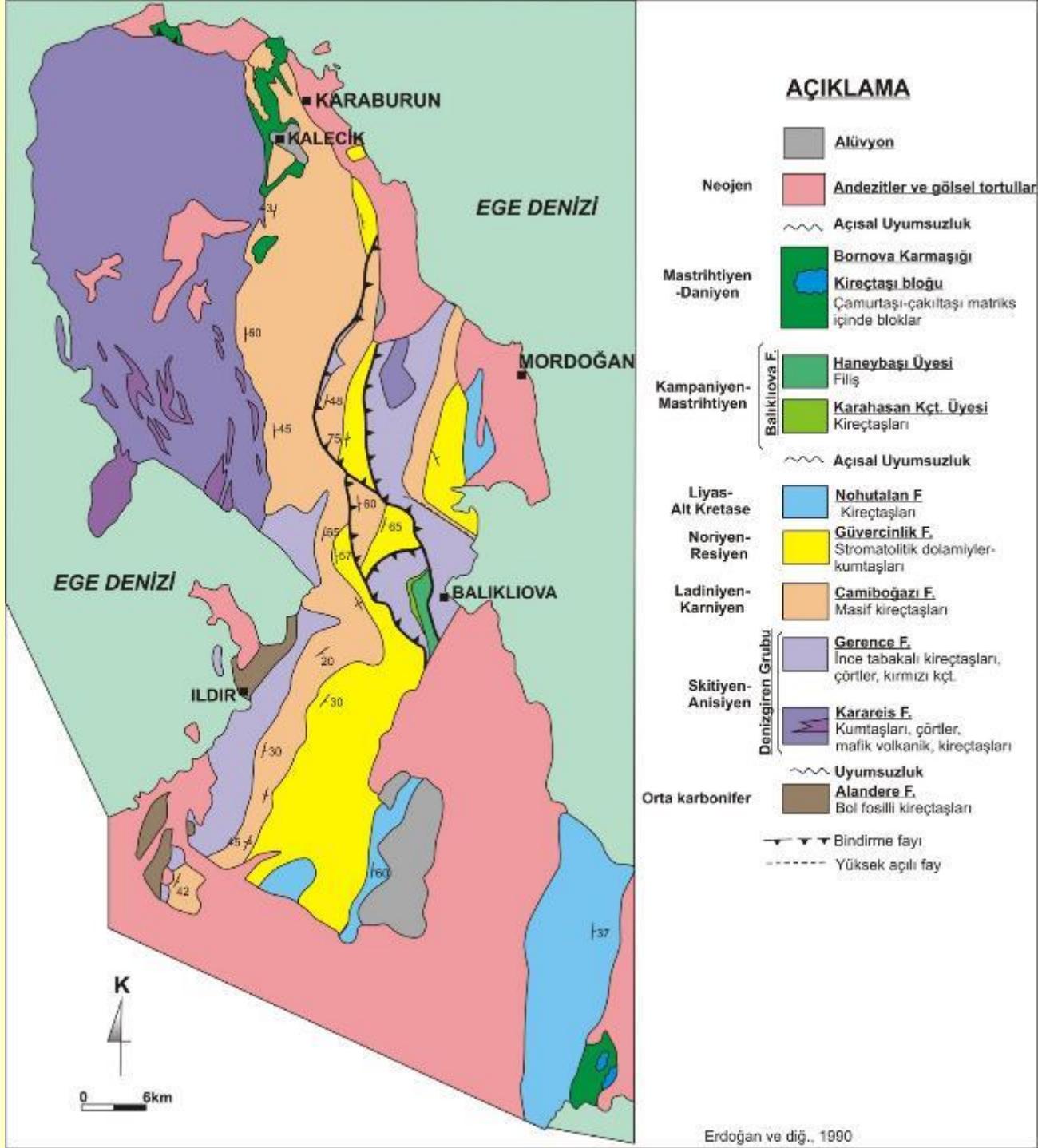
GEOLOGISCHE KARTE
VON MITTELKARABURUN
WESTANATOLIEN



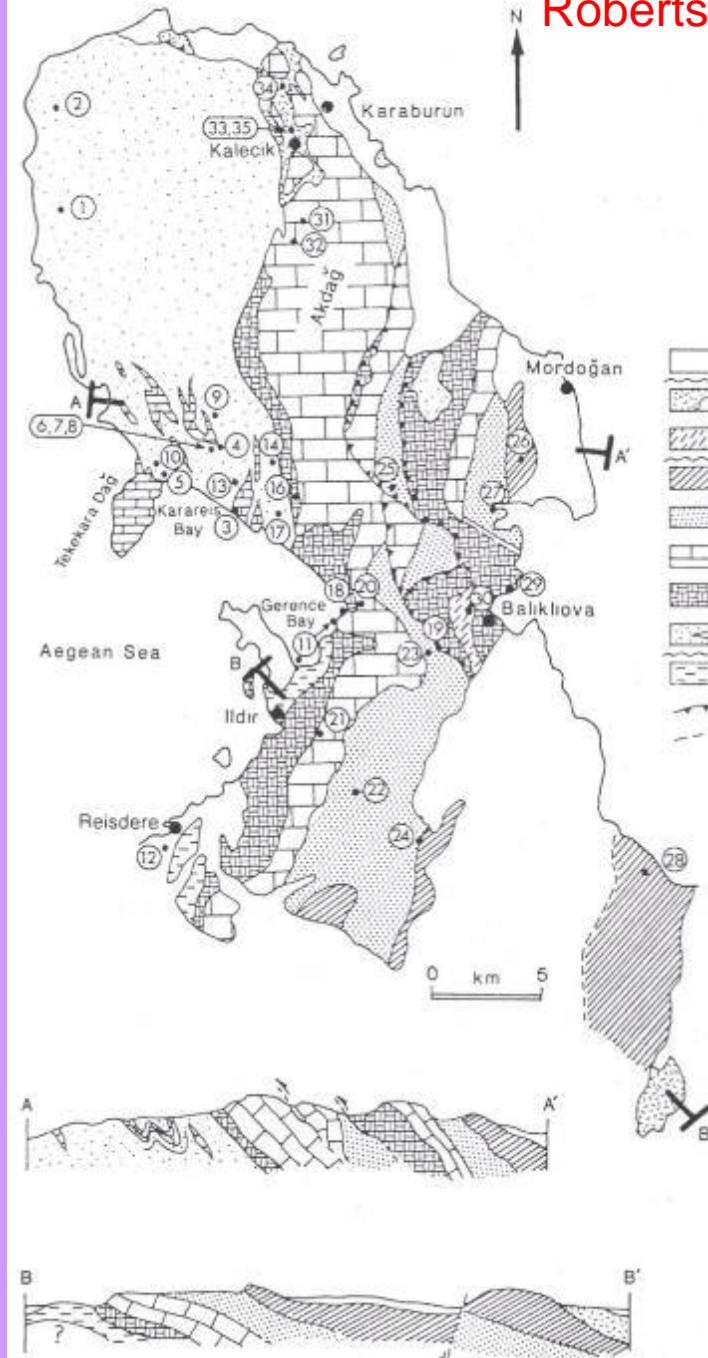


Al	Alüvyon (Alluvium)
Neojen (Neogene)	Andezitler ve gölsel tortullar (Andesites and lake sediments)
	Açışal uyumsuzluk (Angular unconformity)
Mastrihien-Daniyen (Maestrichtian-Danian)	Bornova karmasığı (Bornova melange)
	Kireçtaşı bloğu (Limestone block)
	Camurlası-caklıtası matriks içinde bloklar (Blocks within a matrix of mudstones-conglomerates)
Kampaniyen Mastrihien (Campanian-Maestrichtian)	Haneybaşı üyesi (Haneybaşı member)
	Filis (Flysch)
	Balkıkova formasyonu (Balkıkova formation)
	Karahasan kireçtaşı üyesi (Karahasan limestone member)
	Kireçtaşları (Limestones)
	Açışal uyumsuzluk (Angular unconformity)
Liyas - Alt Kretase Lias - Lower Cretaceous	Nohutalan formasyonu (Nohutalan formation)
	Kireçtaşları (Limestones)
Noriyen - Resiyen (Norian - Retian)	Güvercinlik formasyonu (Güvercinlik formation)
	Stromatolitik dolomitler - kumtaşları (Stromatolitic dolomites - sandstones)
Ladiniyen - Karniyen (Ladin - Carni.)	Camiboğazi formasyonu (Camiboğazi formation)
	Masiv kireçtaşları (Massive limestones)
Skityen - Anisiyen (Scythian-Anisian)	Gerence formasyonu (Gerence formation)
	Ince tabakalı kireçtaşları, cortiller, kırmızı klt. (Thinly-bedded limestones, cherts, red limes.)
Denizgiran Grubu	Karareis formasyonu (Karareis formation)
	Kumtaşları, cortiller, mafik volkanit, kireçtaşları (Sandstone, cherts, mafic volc., limestones)
	Açılışal uyumsuzluk (Unconformity)
Orta Karbonifer Middle Carboniferous	Alandere formasyonu (Alandere formation)
	Bol fosilli kireçtaşları (Fossiliferous limestones)

Erdoğan ve diğ., 1990

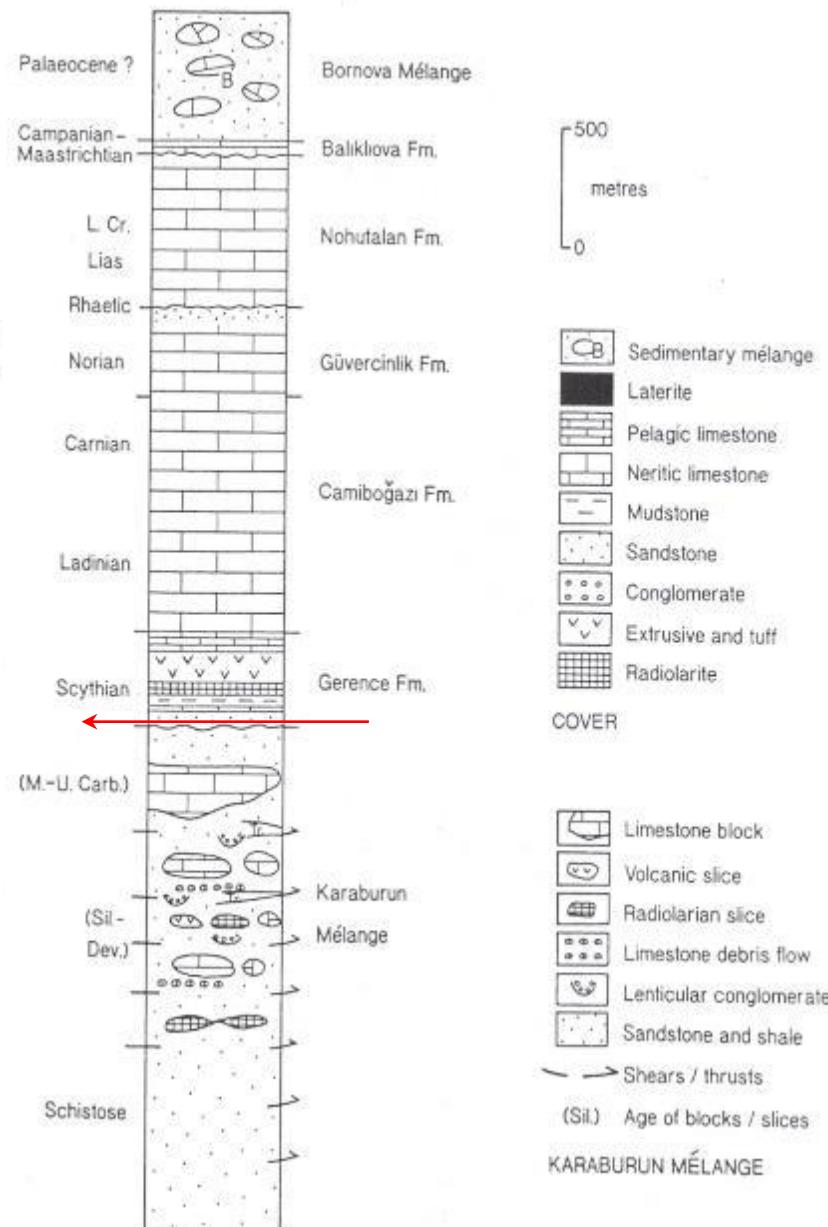


Robertson & Pickett, 2000



Legend for geological units:

- Sediments & volcanics - Tertiary
- Bornova Mélange - Maastrichtian-Danian
- Balıklova Fm. - Campanian-Maastrichtian
- Nohutalan Fm. - Lower Jurassic-Lower Cretaceous
- Güverçinlik Fm. - Norian-Rhaetian
- Carnian
- Ladinian
- Scythian
- (M.-U. Carb.)
- Schistose
- Karaburun Mélange - Late Palaeozoic-Early Mesozoic
- Alandere Fm. - Middle Carboniferous
- thrust
- high-angle fault



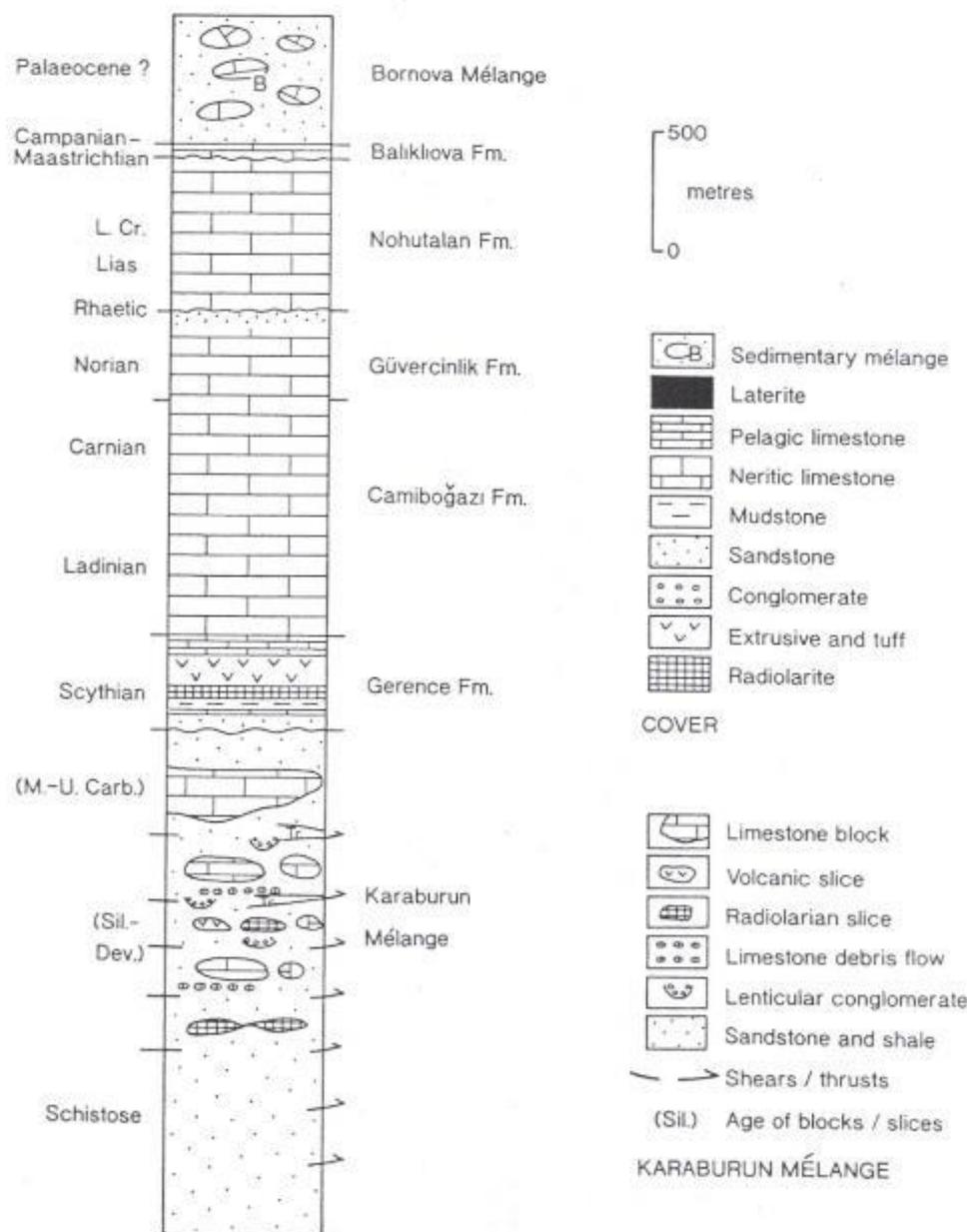


Fig. 3. Composite log of the Karaburun Peninsula succession. Data sources specified in the text.

İşintek, 2002

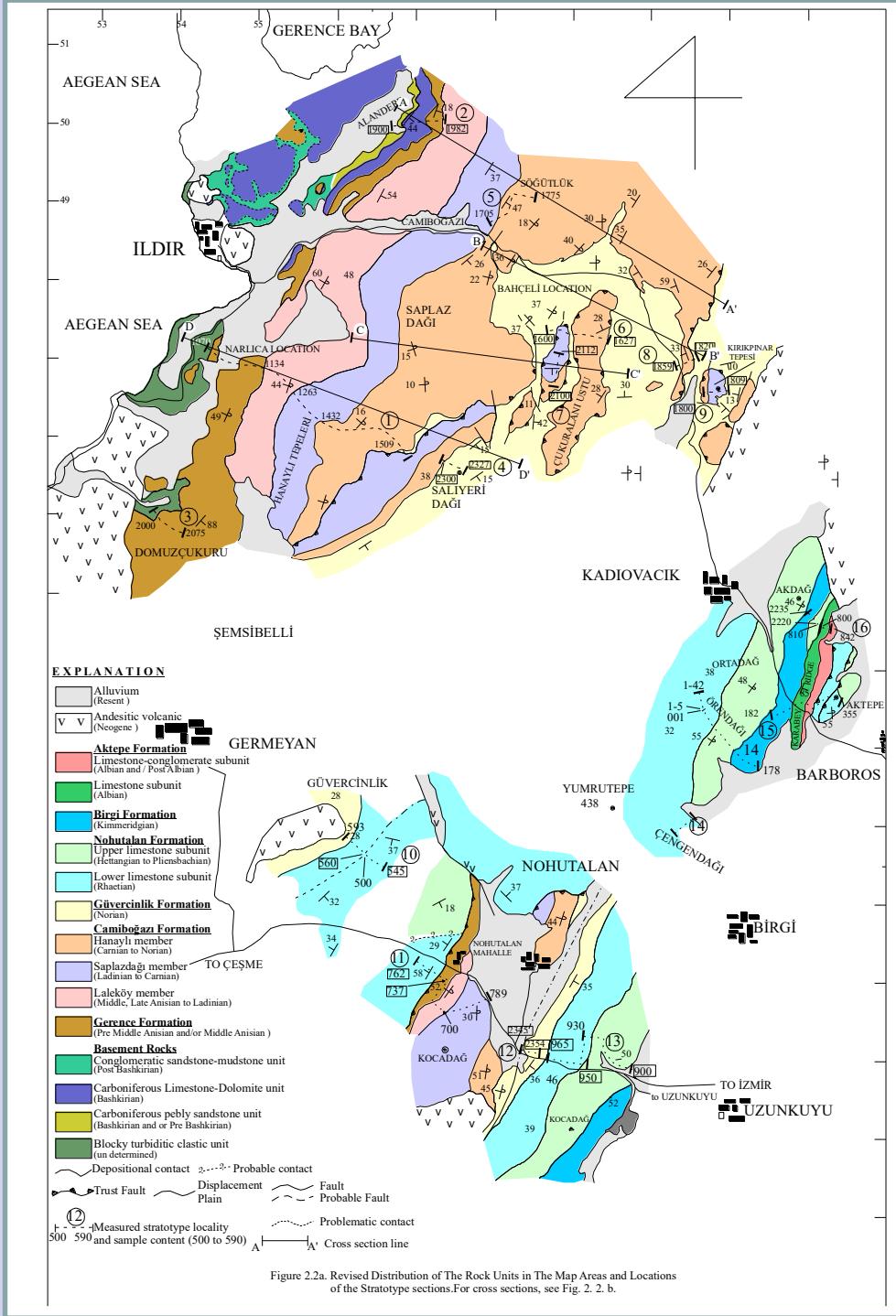
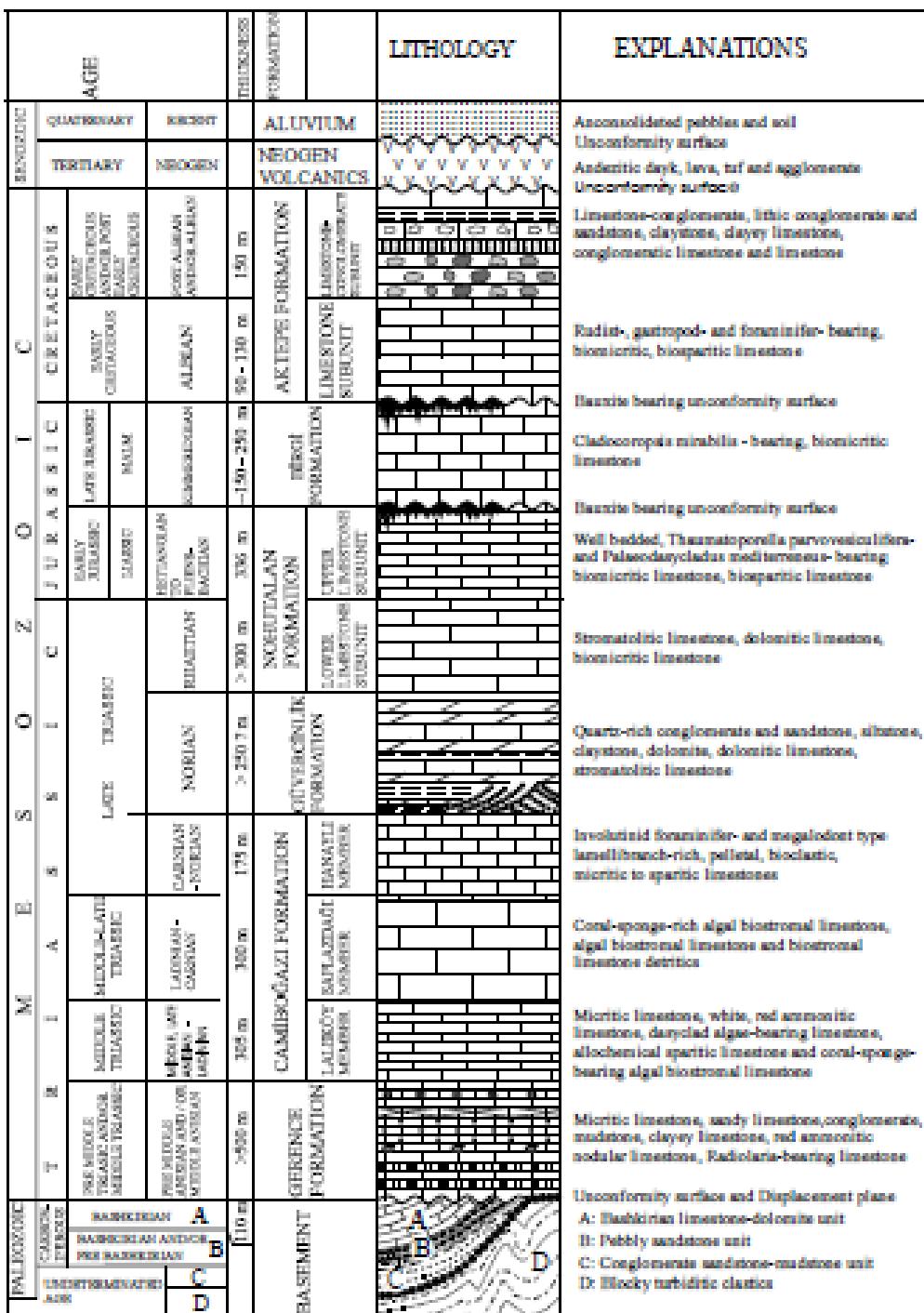


Figure 2.2a. Revised Distribution of The Rock Units in The Map Areas and Locations of the Stratotype sections. For cross sections, see Fig. 2. 2. b.



İşintek, 2002

Rudist, Orbitolina, Favusella

Cladocoropsis, Parurgonina

Palaeodasycladus mediterraneus
Orbitopsella, Labirinthina

Alg, *Aulotortus*, *Triasina hantkeni*, *Megalodont*

Alg, *Aulotortus*, *Triasina*, *Megalodont*

*Megalodont, Lamelliconus,
Aulotortus, Gandinella
Alg, Mercan, Sünger, Diplopora*

Ammonit, Alg, Mercan, Sünger

Ammonit, *Meandrospira*

Mercan, Sünger, Krinoid, Foraminifer

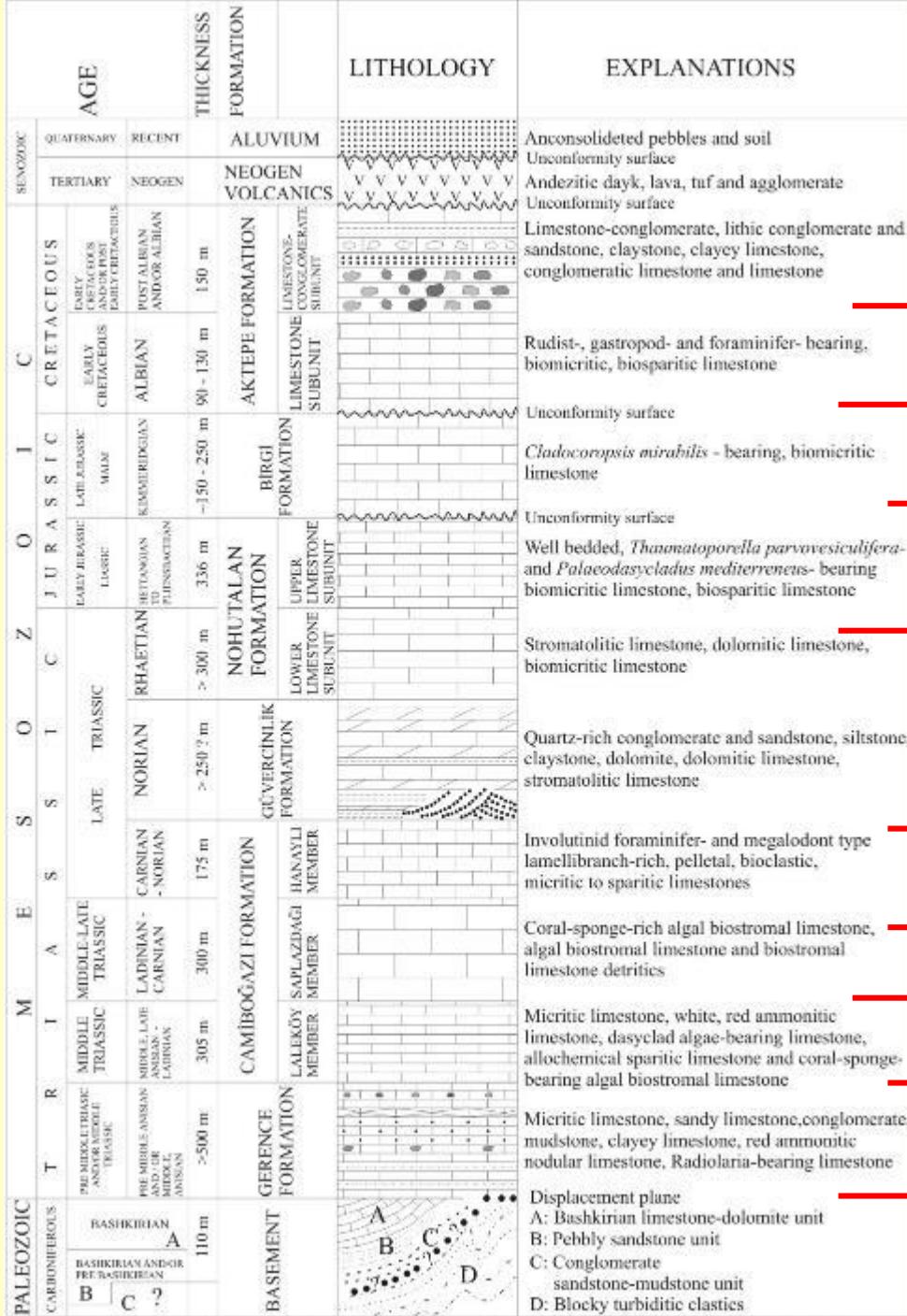


Figure 2. 1 Generalized Lithostratigraphic Columnar Section For the Maps of Areas.

İşintek, 2002

Rudist, Orbitolina, Favusella

Cladocoropsis, Parurgonina

Palaeodasycladus mediterraneus
Orbitopsella, Labirinthina

Alg, Aulotortus, Triasina hantkeni,
Megalodont

Alg, Aulotortus, Triasina, Megalodont

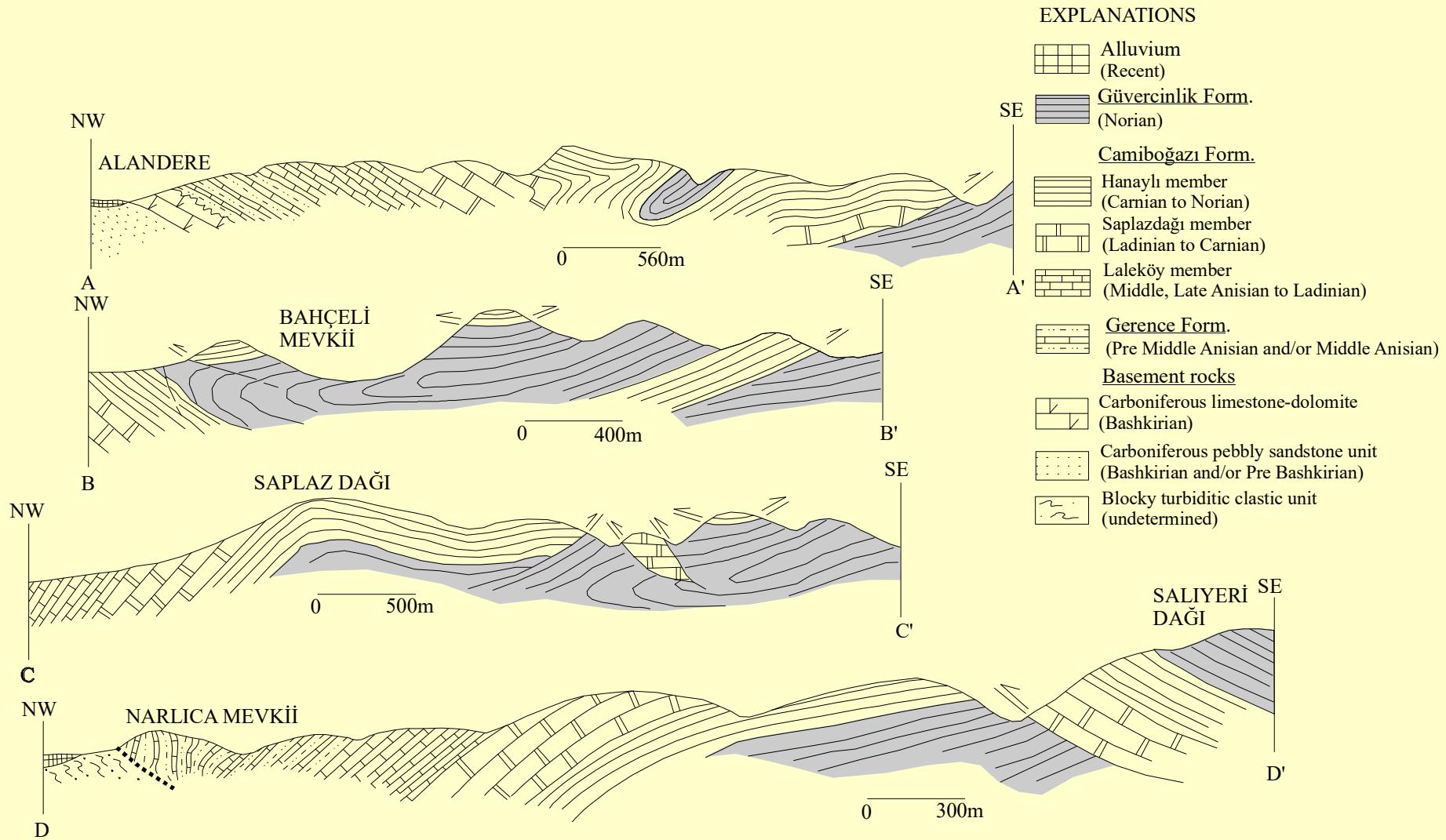
Megalodont, Lamelliconus,
Aulotortus, Gandinella

Alg, Mercan, Sünger, Diplopora

Ammonit, Alg, Mercan, Sünger

Ammonit, Meandrospira

Mercan, Sünger, Krinoid,
Foraminifer



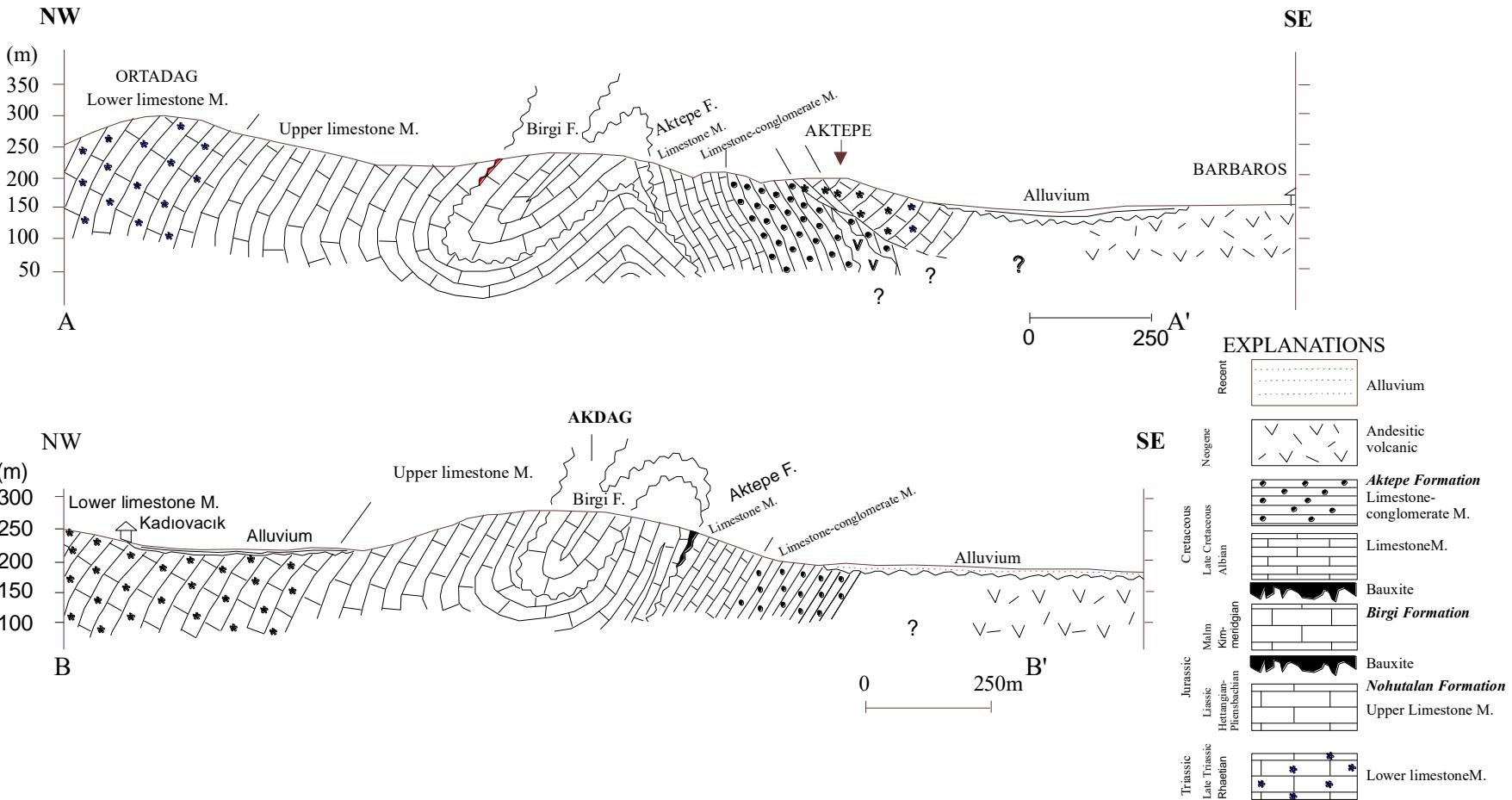


Figure 2. 23 Cross Sections showing Relations of Rock Units In the Barbaros Map Area(See fig. 2 22)

BRINKMANN et al., 1972

	AKTEPE FORMATION	LIMESTONE-CONGLOMERATE-MARL
	GASTROPOD FORAMINIFER-BEARING LIMESTONE	
"Cladocoropsis" FORMATION		
NOHUTALAN FORMATION	LIASSIC LIMESTONE UNIT	
	LIMESTONE UNIT	
	DOLOMITE UNIT	
GÜVERCİNLİKLİK FORMATION		
HANAYLI FORMATION		
CAMİBOĞAZI FORMATION		
LALEKÖY FORMATION	Anisian	Ladinian
KOYUTEPE FORMATION		
DOMUZ ÇUKURU FORMATION		Scythian

THIS STUDY

AKTEPE FORMATION	LIMESTONE-CONGLOMERATE UNIT	
	LIMESTONE UNIT	
BİRGI FORMATION		
NOHUTALAN FORMATION	UPPER LIMESTONE UNIT	
	LOWER LIMESTONE UNIT	
GÜVERCİNLİKLİK FORMATION		
	HANAYLI UNIT	
SAPLAZDAĞI FORMATION		
	LALEKÖY UNIT	
GERENCE FORMATION		

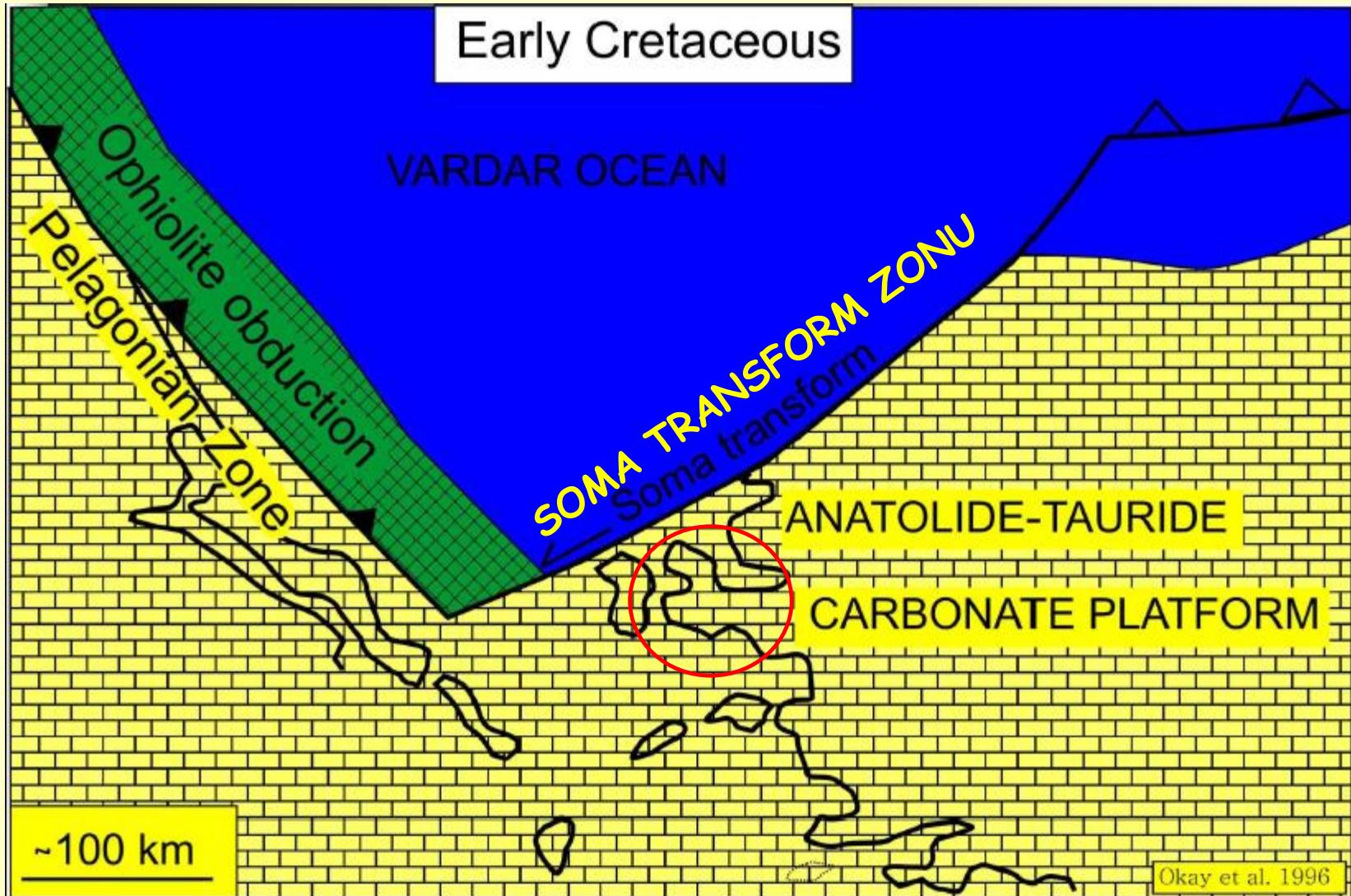
ERDOĞAN et al. 1990

Albian and / or Post Albian	
Albian	
Kimmeridgian	
NOHUTALAN FORMATION	
GÜVERCİNLİKLİK FORMATION	
CAMİBOĞAZI FORMATION	
GERENCE FORMATION	

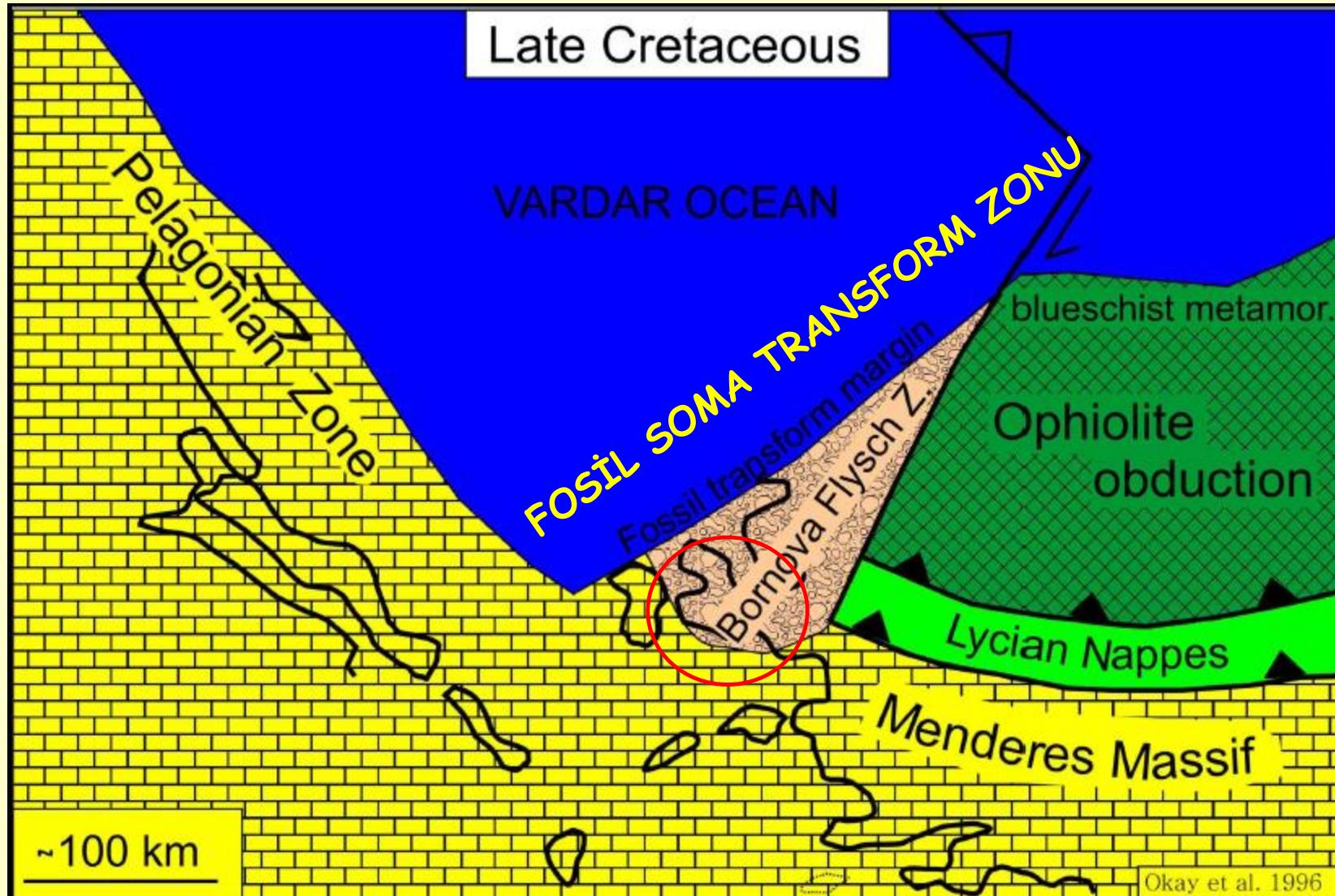
Albian	
Aptian-Albian	
Kimmeridgian	
Oxfordian	
Liassic	
Norian - Rhaetian	
Carnian	

Figure 1. 3 Comparison of the Stratigraphy of Brinkmann et al. (1972), Erdoğan et al. (1990) and This Study on the Central Karaburun Peninsula.

ERKEN KRETASE



GEÇ KRETASE



Yeniliman s.

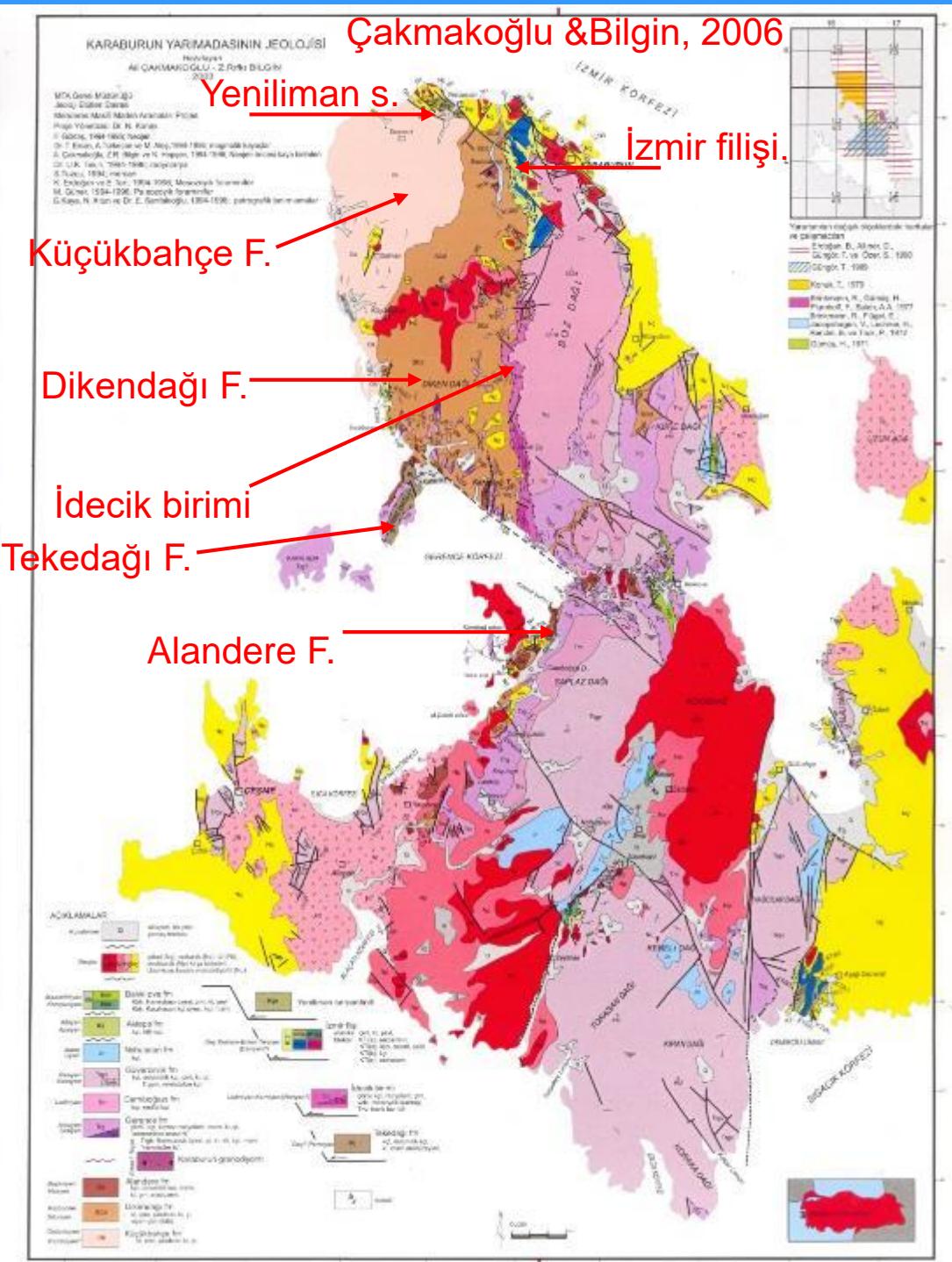
İzmir filisi.

Küçükbaş F.T

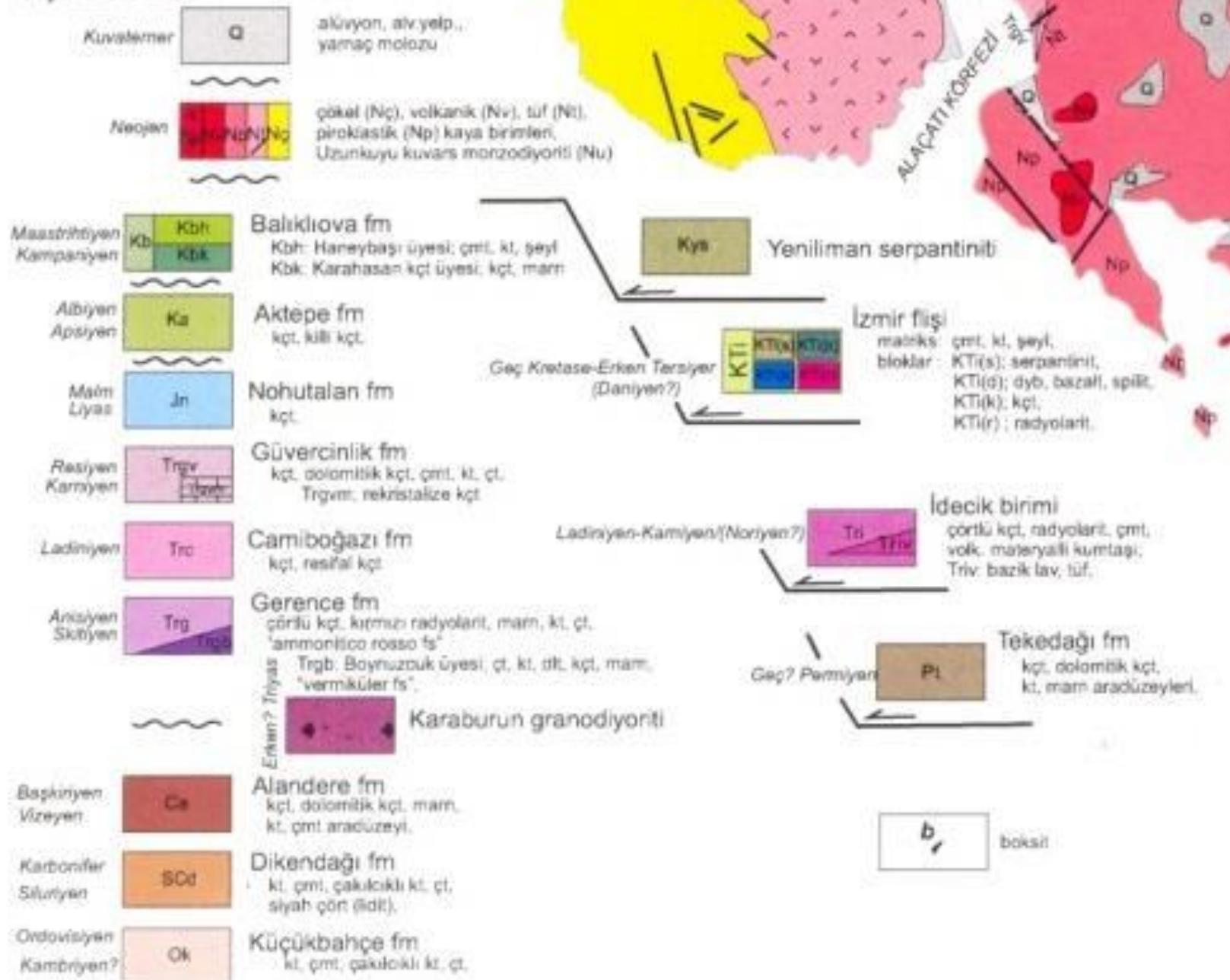
Dikendağı F.

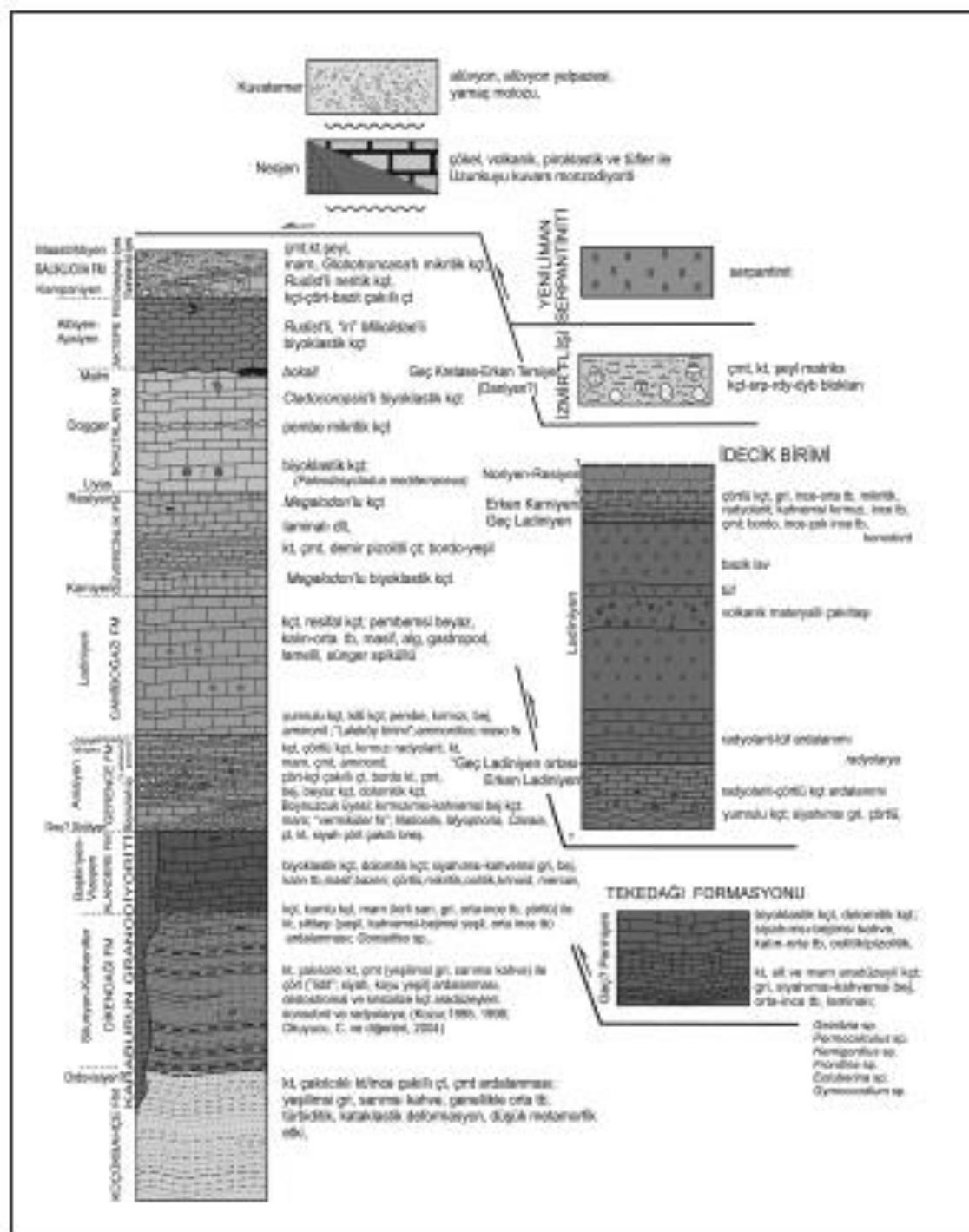
İdecik birimi Tekedağı F.

Alandere F.



AÇIKLAMALAR

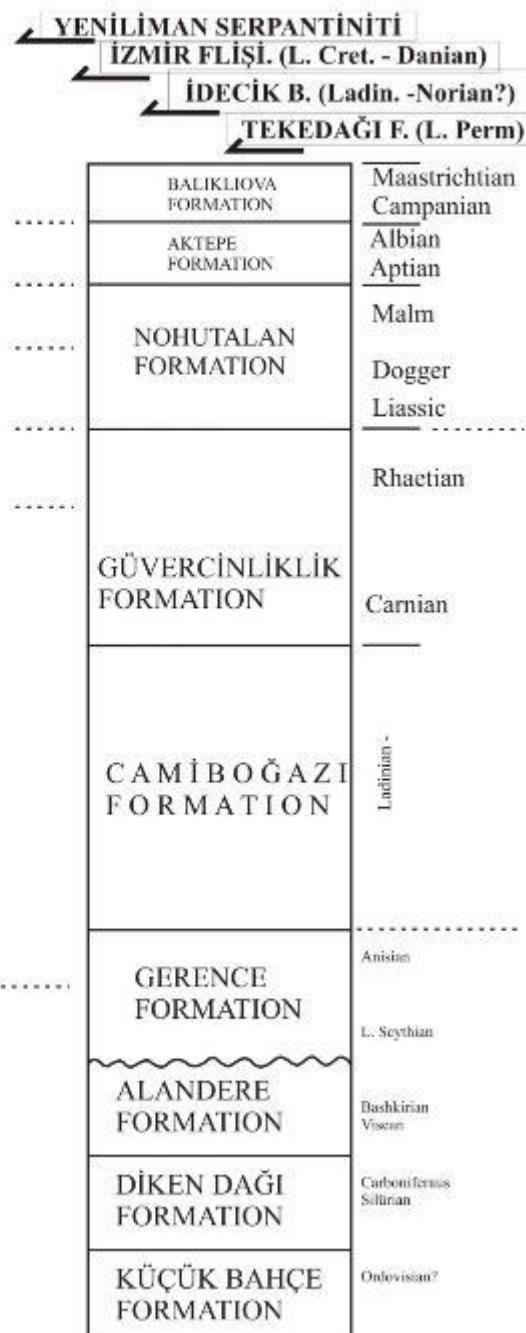
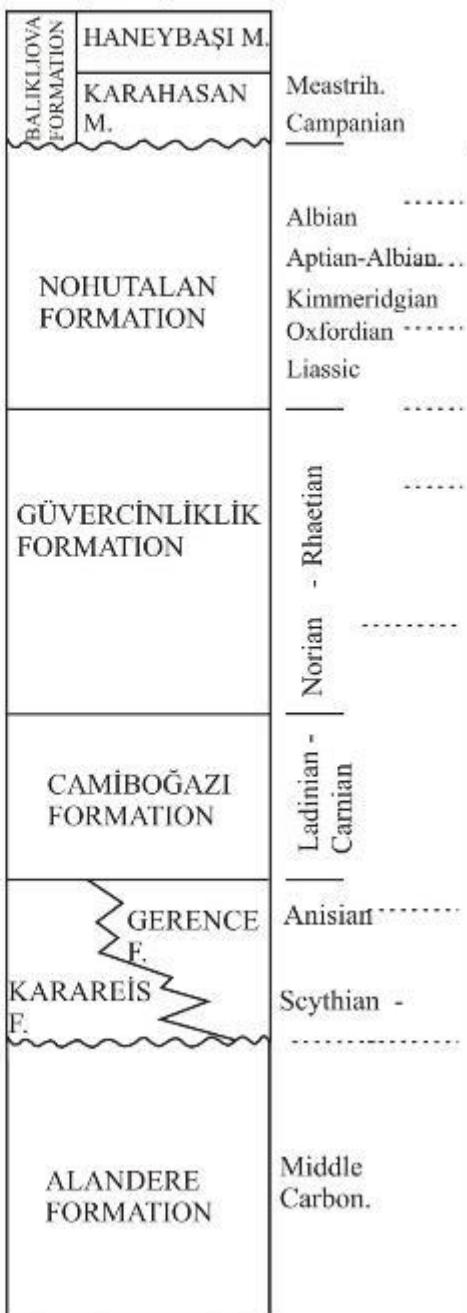




BORNOVA K. (Meast. - Danian)

BRINKMANN et al., 1972

	LIMESTONE-CONGLOMERATE-MARL	Albian
	GASTROPOD FORAMINIFER-BEARING LIMESTONE	Aptian
"Cladocoropsis" FORMATION		Barremian
NOHUTALAN FORMATION	LIASSIC LIMESTONE UNIT	Malm
	LIMESTONE UNIT	Lias
GÜVERCİNLIKLIK FORMATION	DOLOMITE UNIT	Rhaetian
HANAYLI FORMATION		Norian
CAMİBOĞAZI FORMATION		Carnian
LALEKÖY FORMATION		Ladinian
KOYUTEPE FORMATION		Anisian
DOMUZ ÇUKURU FORMATION		Scythian
CARBONIFERAUS LIMESTONE		



VENİLİMAN SERPANTİNİTİ
İZMİR FLİSİ (L. Cret. - Danian)

İDECİK B. (Ladin. -Norian?)
TEKEDAĞI F. (L. Perm)

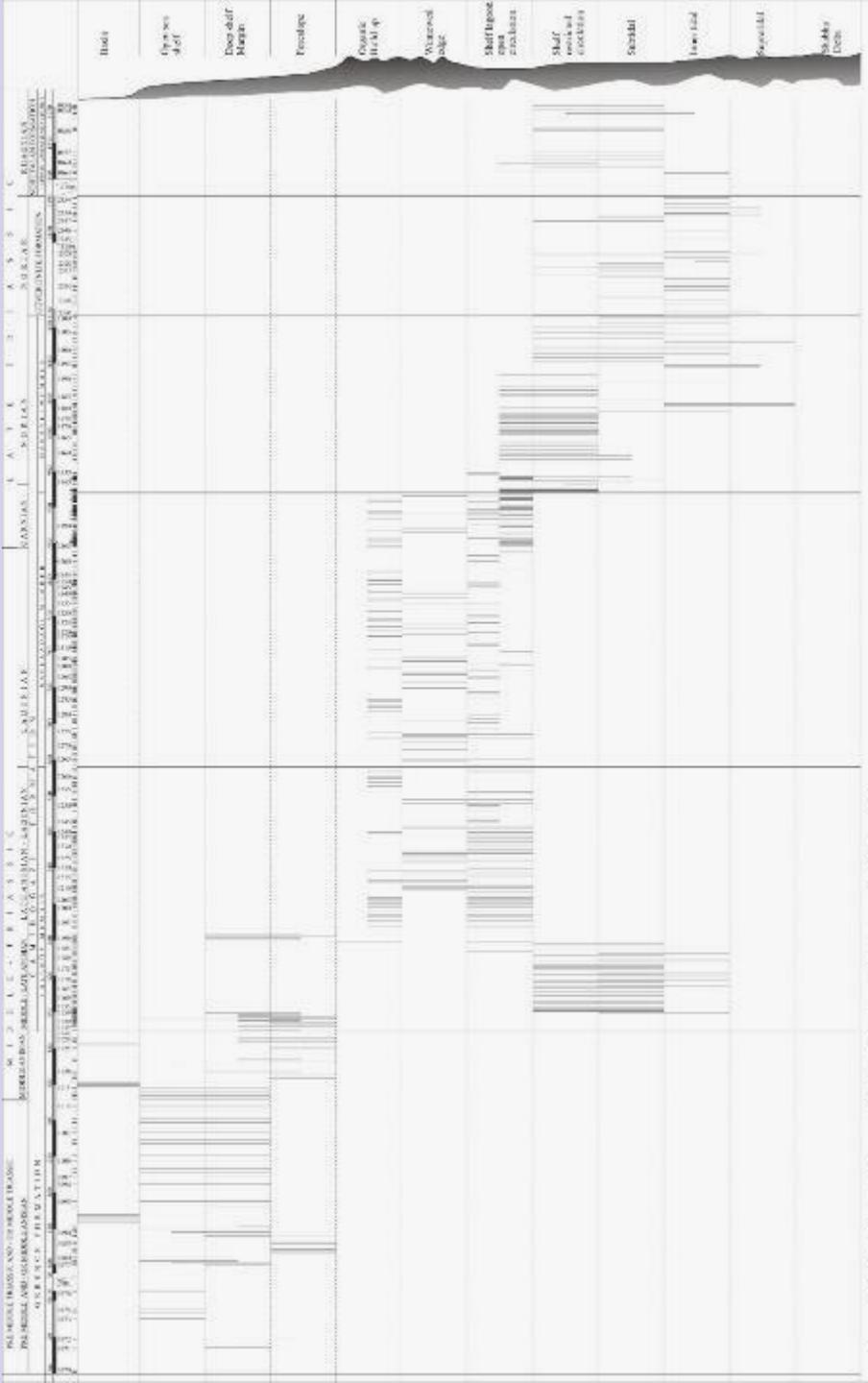


Figure 4 | Vertical Facies Changes in Triassic Formations (Stratigraphic Log 1-4 [2 and 13])

İşintek, 2002

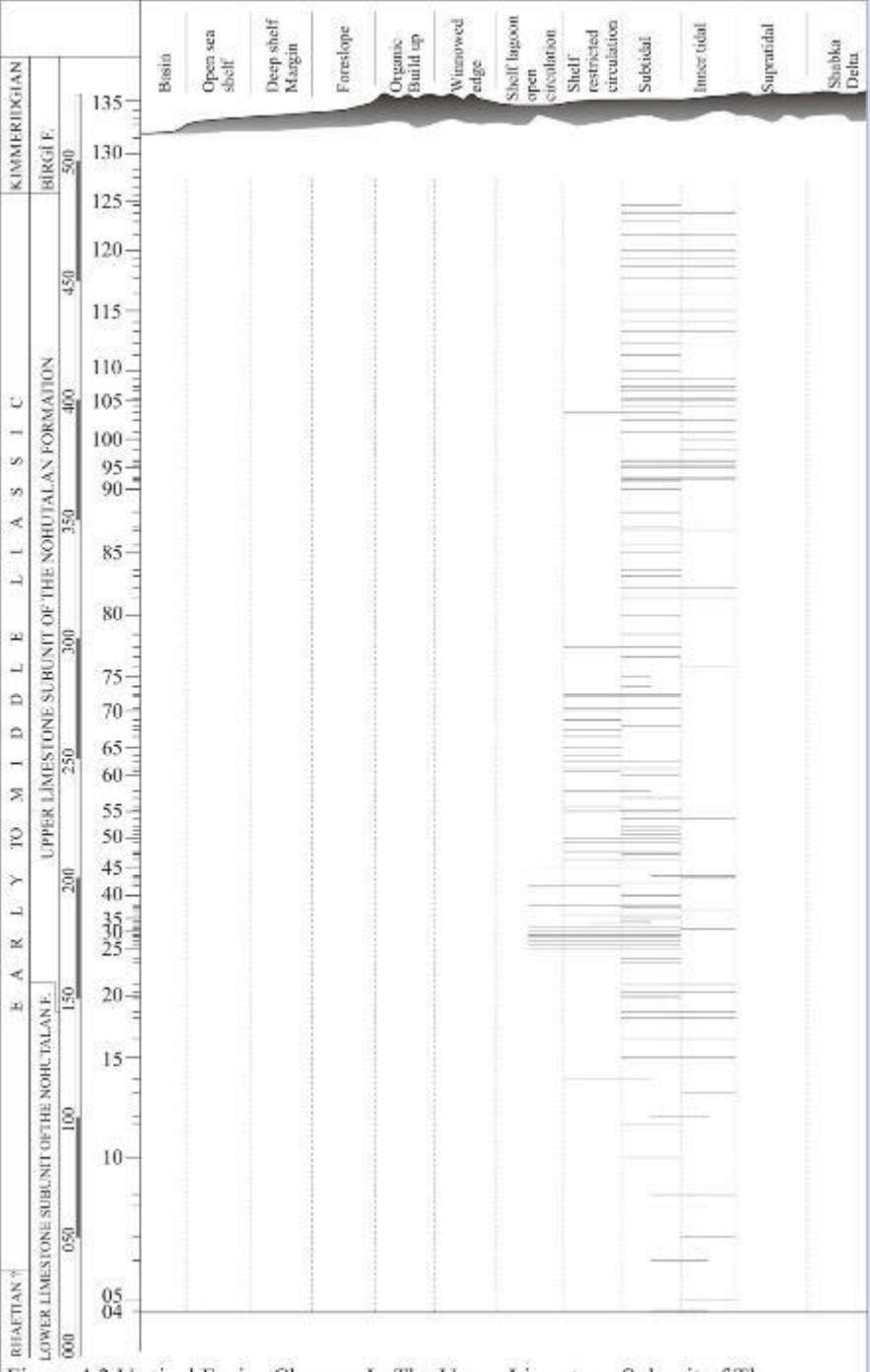


Figure 4.2 Vertical Facies Changes In The Upper Limestone Subunit of The Nohutalan Formation (Stratotype no. 14).

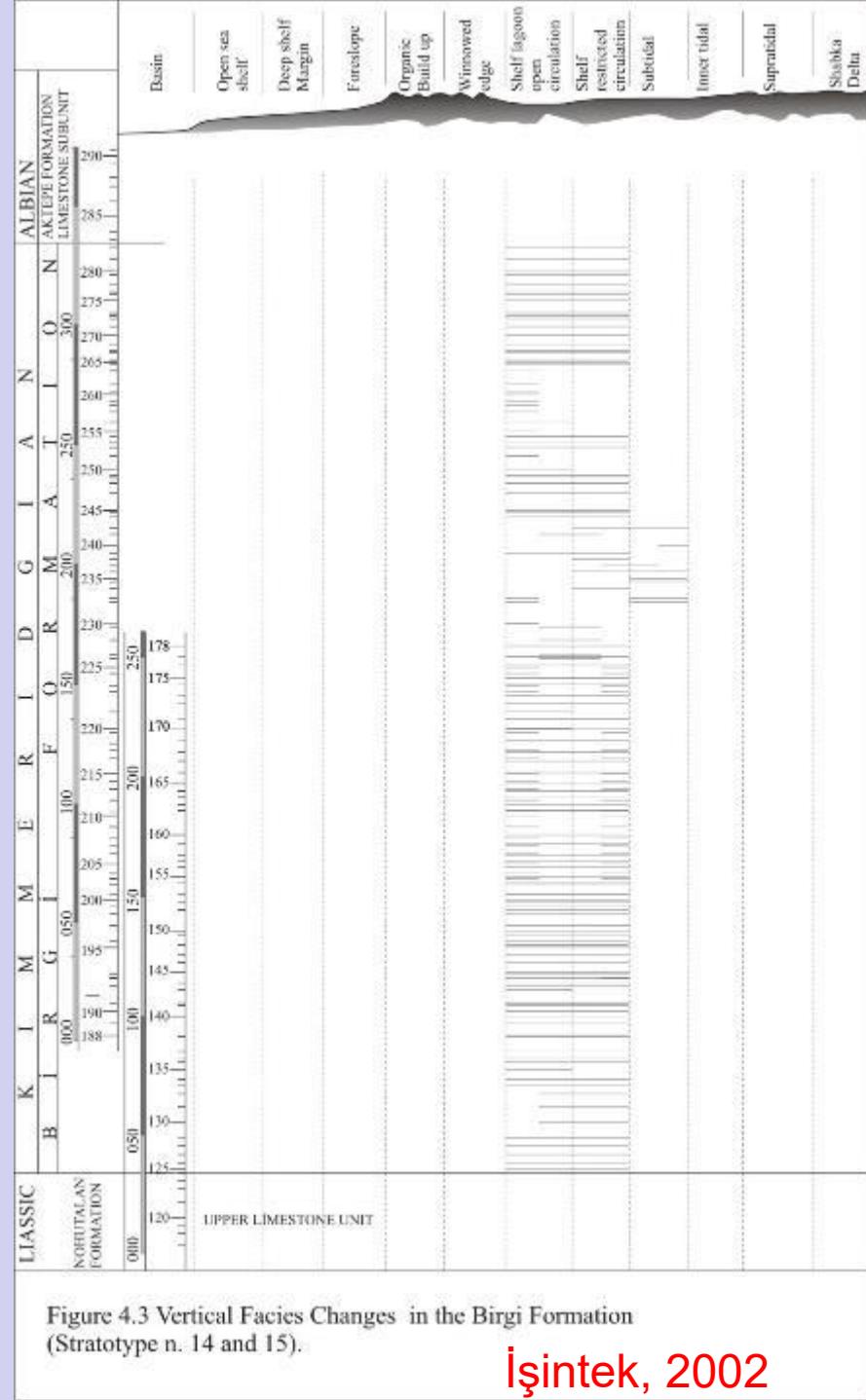
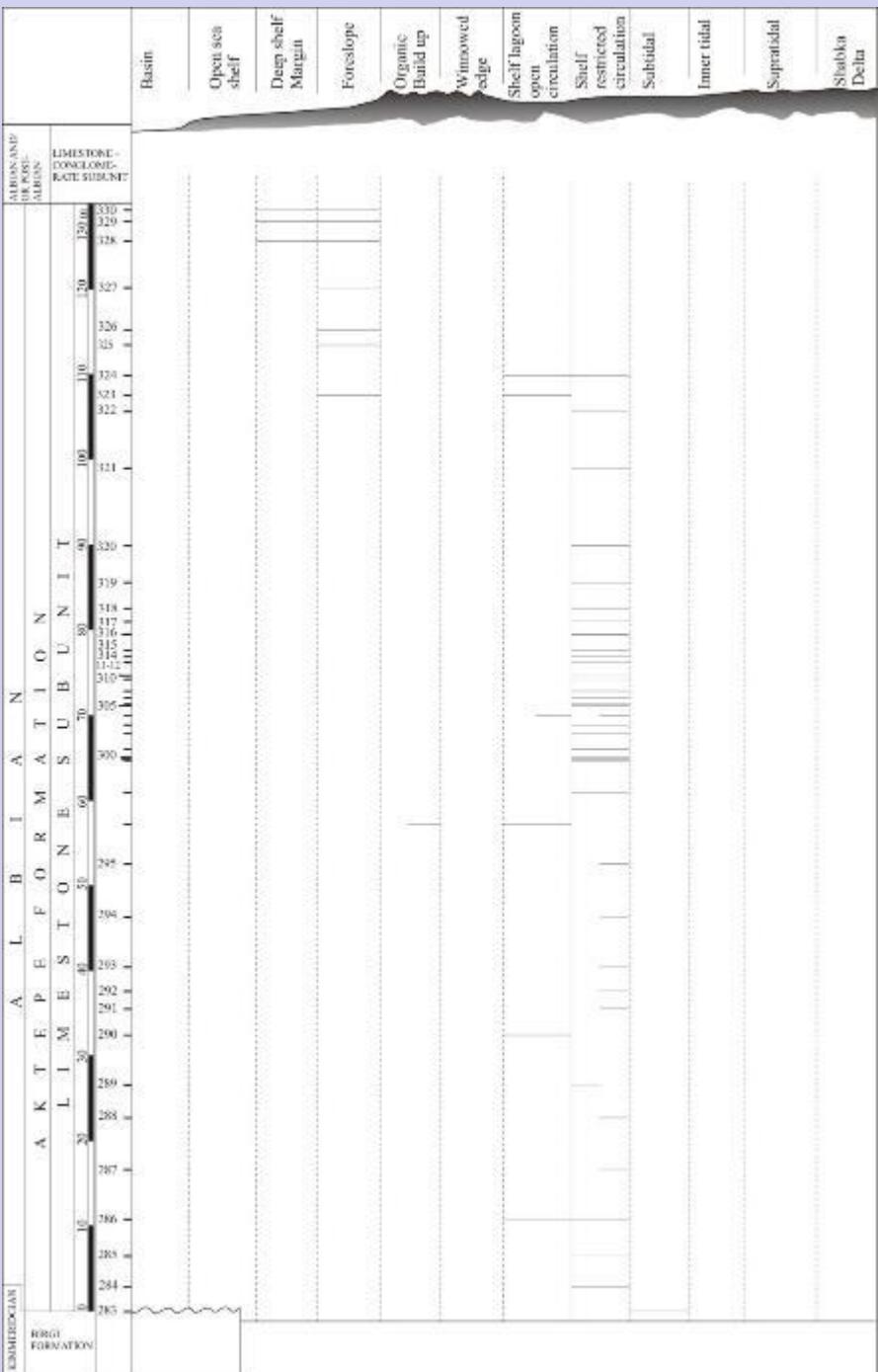


Figure 4.3 Vertical Facies Changes in the Birgi Formation (Stratotype n. 14 and 15).

İşintek, 2002



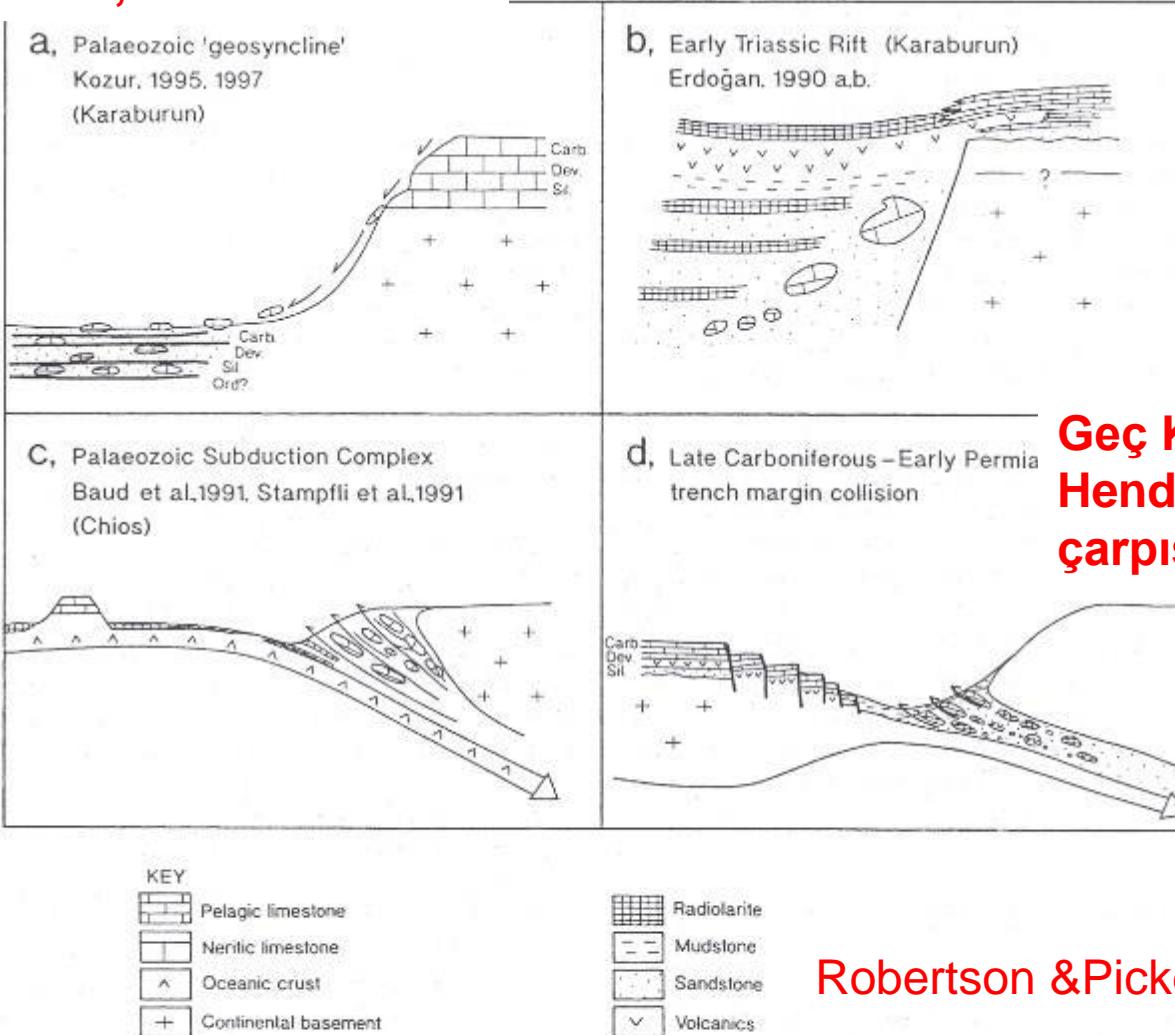
İşintek, 2002

Figure 4. 4 Vertical Facies Changes in the Aktepe Formation (Stratotype no. 15).

Paleozoyik Jeosenkinal Kozur, 1995, 1997

E.Triyas Riftleşme Erdogan 1990 a, b

Paleozoyik
Dalma-batma
Birikim
Karmaşığı
Boud et al.
1991
Stampfli et al.
1991



Robertson & Picket, 2000

Fig. 18. Some alternative tectonic interpretations of the Karaburun and Chios Mélanges: (a) as a layer-cake succession of Ordovician(?)–Lower Permian(?) olistostromes (Kozur 1995); (b) as a highly deformed Triassic rift unit; (c) as a Palaeotethyan (i.e. Permo-Triassic) accretionary complex; (d) as an accretionary complex involving collision of a trench with a platform (microcontinent?) – favoured model.

Geç Karbon. E. Perm
Hendek-platform
çarpışması

Erken Triyas

Orta-Geç Triyas

Orta-E. Erken Jura

Geç Kretase

Maastrichtian-Daniyen

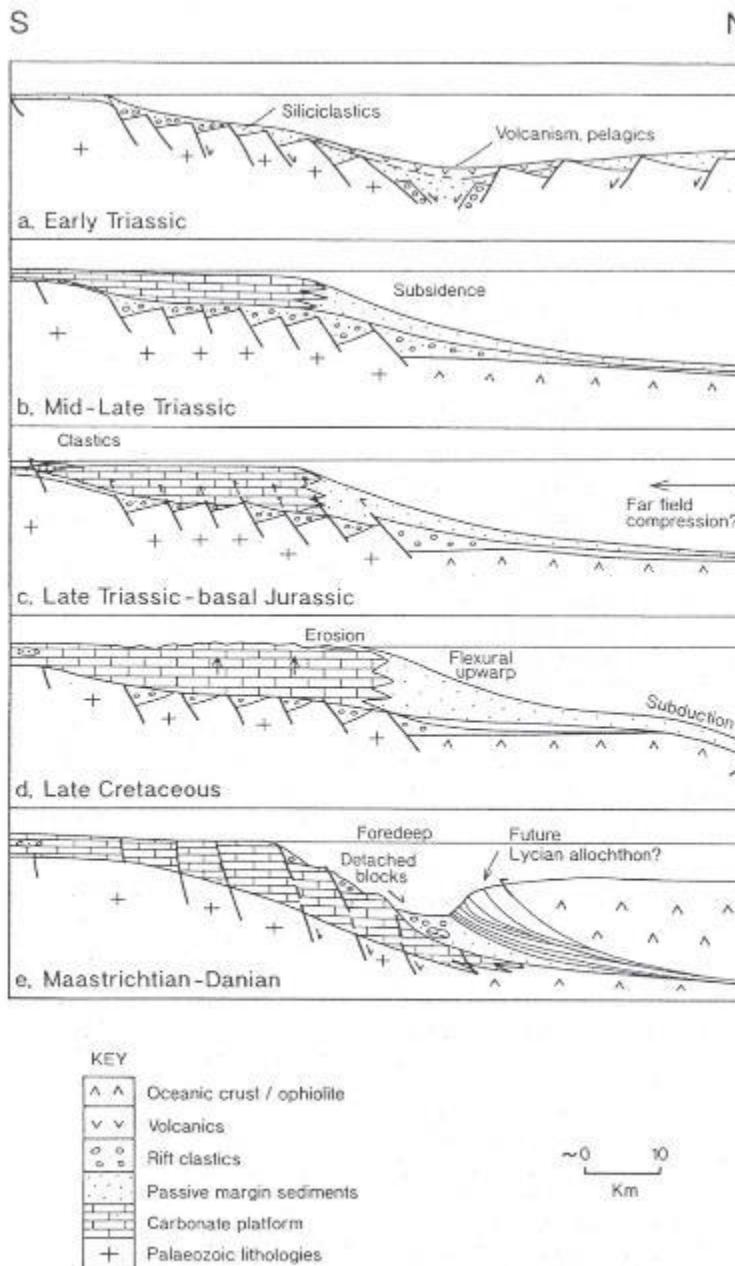


Fig. 19. Sketch sections showing the proposed Mesozoic-Early Tertiary tectonic evolution of Karaburun and Chios related to Triassic rifting and development of a subsiding passive margin (Jurassic-Cretaceous) emplaced in stages related to later collisional deformation (Late Cretaceous-Early Tertiary).

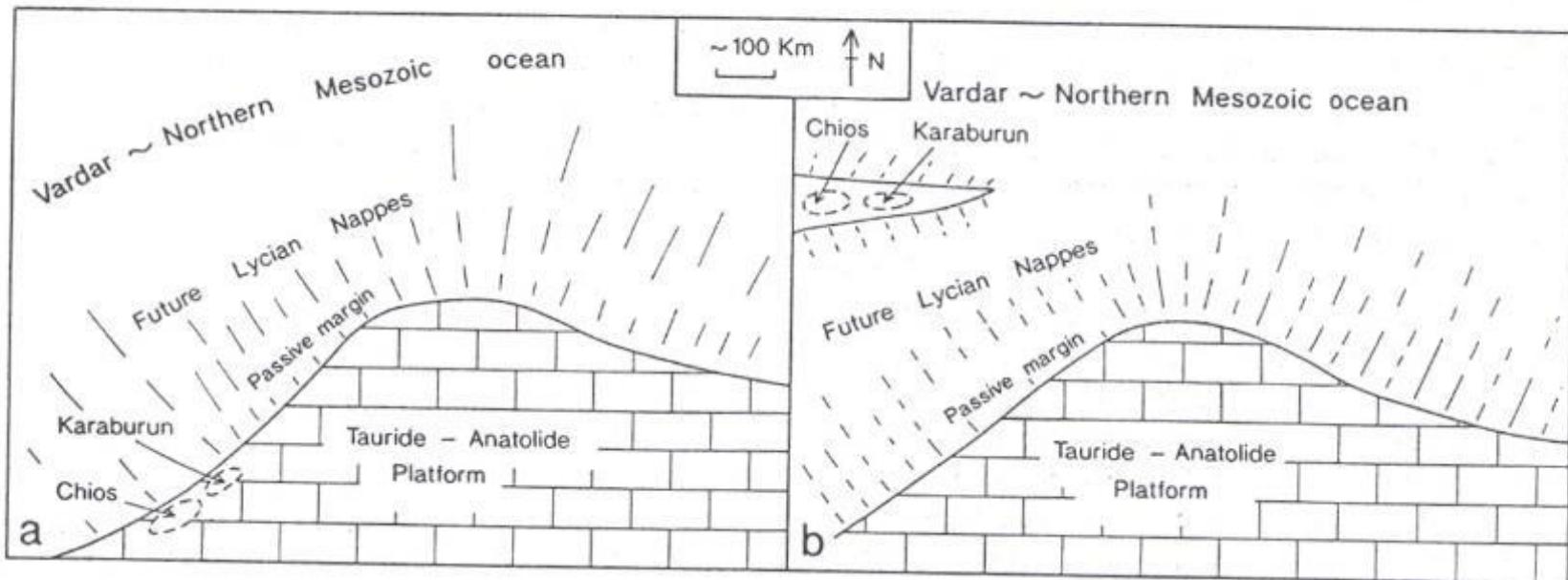
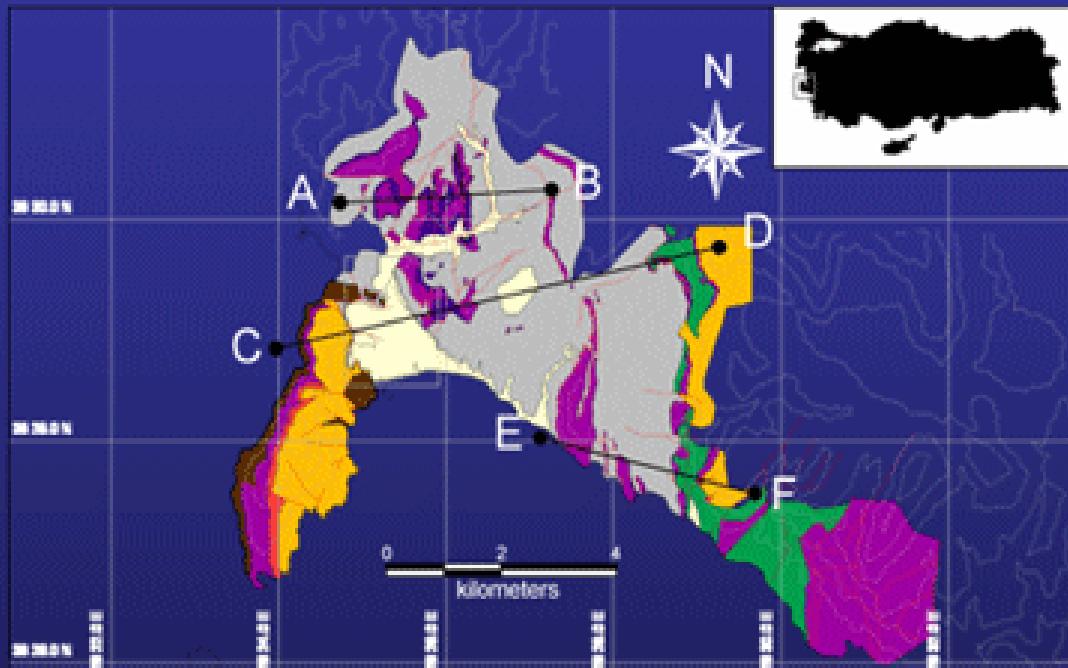


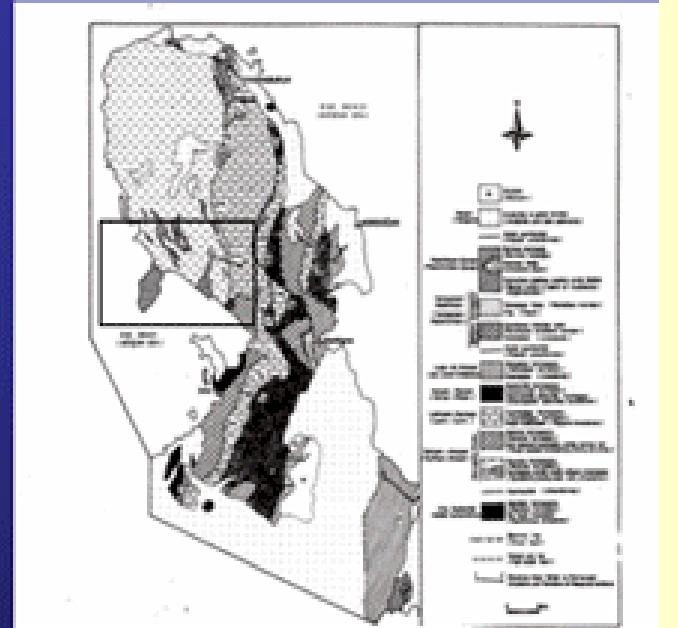
Fig. 20. Plate tectonic sketch maps showing alternative possible settings of the Karaburun-Chios unit: (a) as an embayment to the west of a promontory of the Anatolide-Tauride Platform, including the Menderes Massif; (b) as a separate small microcontinent located within Neotethys further north. (a) Is favoured – see text for explanation.

Rosselet, 2002, 2003

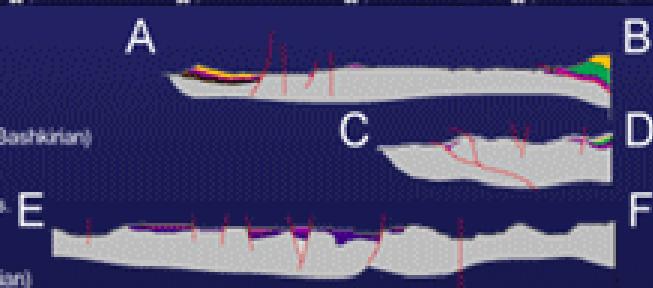
Geological map of the Gerence Bay (Rosselet 2002)



- Quaternary
- Karanis Formation (Visayan)
- Alandere Formation (Serpukhovian-Bashkirian)
- Basal conglomerates (Late Scythian)
- Gerence: Debris-flows, calcuturbidites (Late Scythian-Camrian)
- Gerence: "Ammonitico Rosso"
- "Halstatt" facies (Late Scythian-Camrian)
- Gerence: "Pietra Verde", grauwackes (Late Scythian-Camrian)
- Cambogaz: Carbonate platform (Middle Anisian-Camrian)

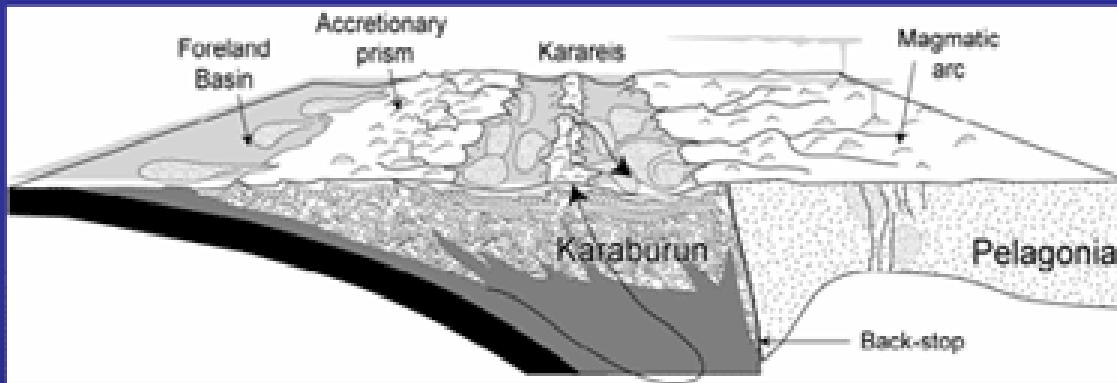


Geological map of the Karaburun Peninsula (Erdoğan et al. 1995)



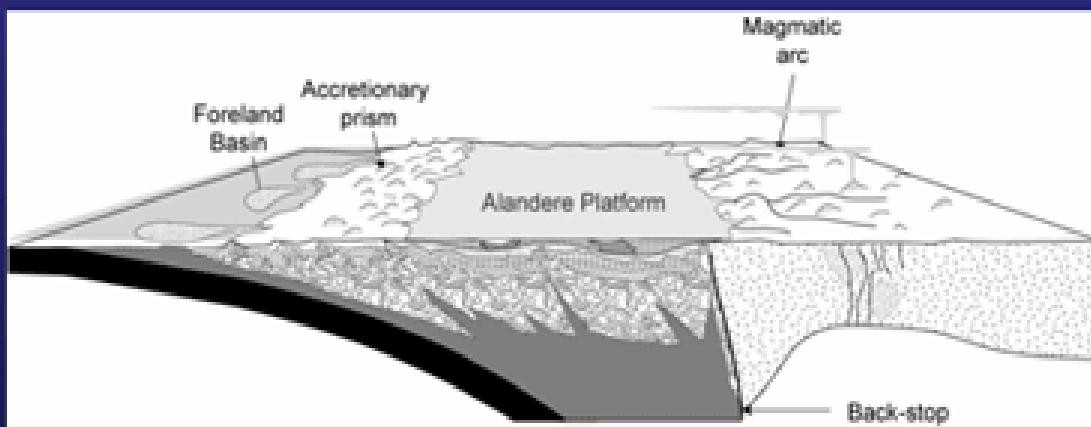
The Karaburun synthetic stratigraphic section





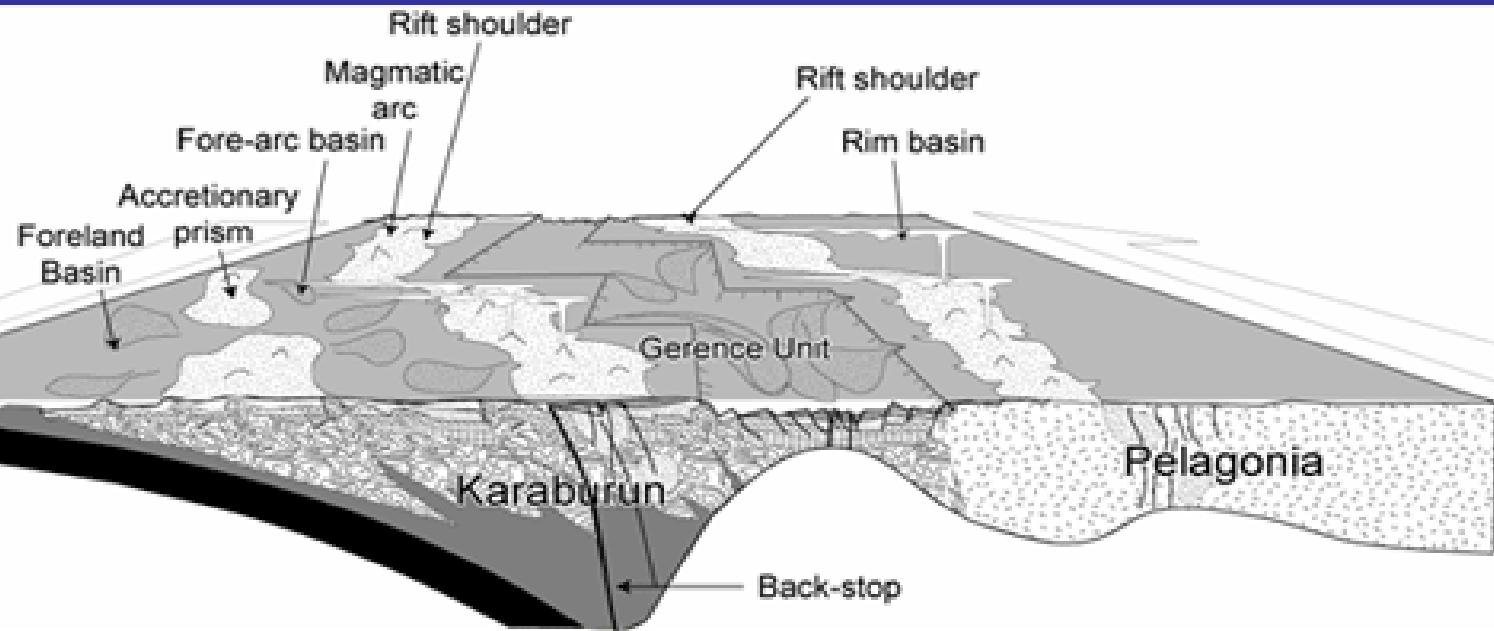
Early Carboniferous (Visean)

Northward subduction of the Paleotethys under the Pelagonian Terrane. The fore-arc basin receives detritic material from the upper plate (arc and back-stop) and from the accretionary prism (metamorphic exotics).



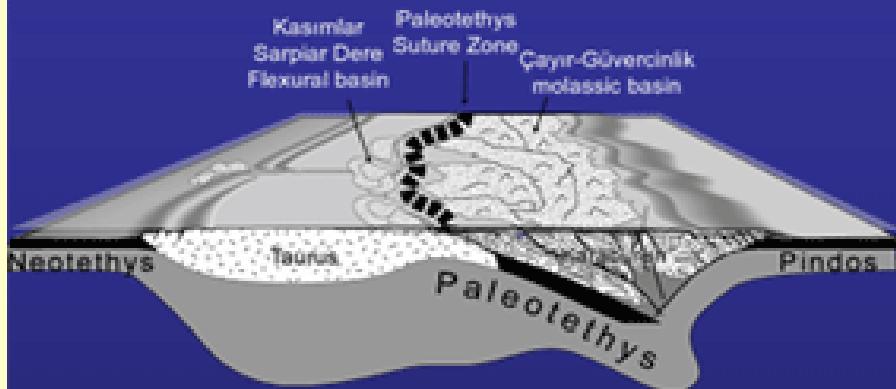
Serpukhovian-Bashkirian

The Alandere platform progradation sealed the Karareis fore-arc basin during Serpukhovian-Bashkirian. A rapid shallowing-up is observed in the Alandere Section.

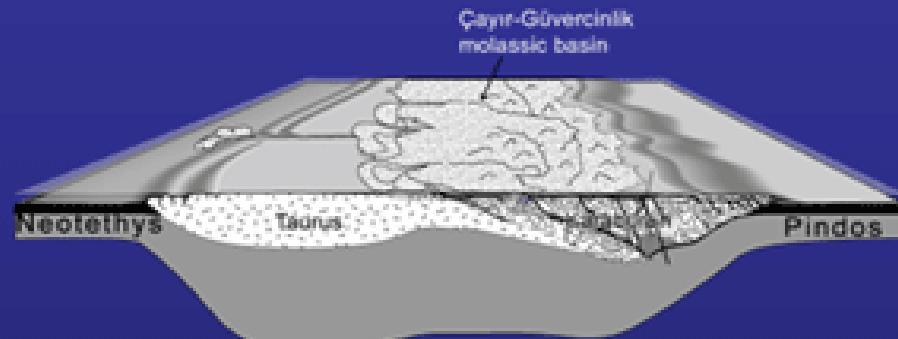


Late Scythian-Carnian

A back-arc (Maliac, Pindos) basin opens in the Carboniferous fore-arc basin, due to the important roll back of the Paleotethys slab (Cordillera collapse). A transgressive conglomerate lies in discordance on the rift shoulders. The Gerence Unit corresponds to the syn-rift sequences (debris-flows, olistostromes, pelagic sediments « Ammonitico Rosso »). Detritic material comes essentially from the magmatic arc (« Pietra Verde ») and from shallow platforms.



Carnian-Norian
Pre-collisional stage



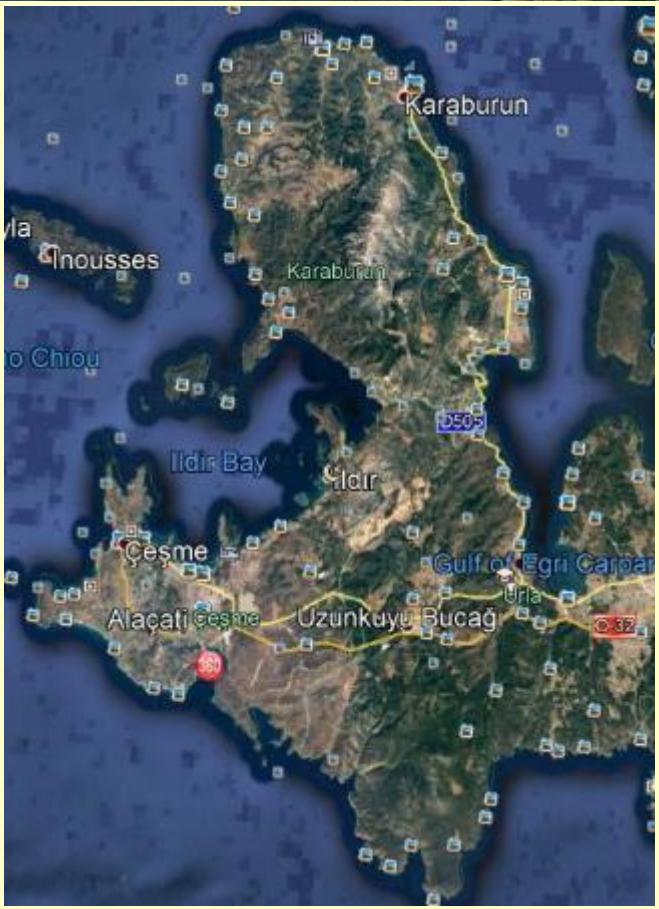
Norian-Early Liassic
Collision stage, plate coupling

Carnian-Norian, Eo-cimmerian pre-collision stage

- Margin inversion and flexural basin in the Western Taurides (Kasımlar-Sarpiar Dere)
- Continental « Molasse » in Karaburun (Güvercinlik)

Norian-Early Jurassic, Eocimmerian collision stage

- Eocimmerian molassic basin (Çayır-Güvercinlik « Molassic » basin)
- Post-collision discordance



TARİHSEL VE TÜRKİYE JEOLOJİSİ ARAZİ ÇALIŞMASI

KARABURUN YARIMADASI'NIN JEOLOJİK EVRİMİ



Tarih: 26. 10. 2019 CUMARTESİ



Hareket saatı ve veri: 09:00'da BUCA-TINAZTEPE
KAMPÜS BATI GİRİŞ KAPISI (Batı giriş kapısından
geçtikten sonra "Yerleşke otobüs durağı")

İkinci Durak: 09: 15 Narlıdere Belediyesi Atatürk Kültür
Merkezi karşısı



Malzemeler:

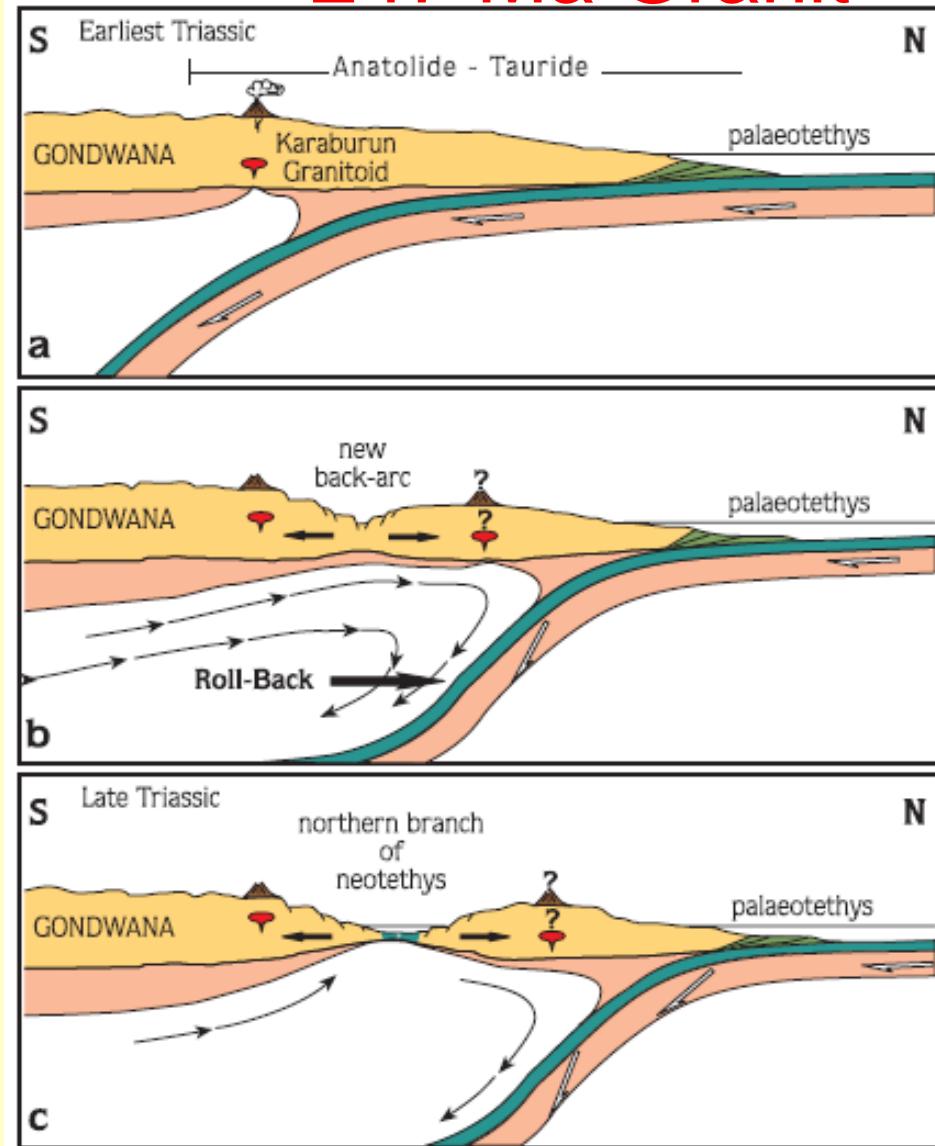
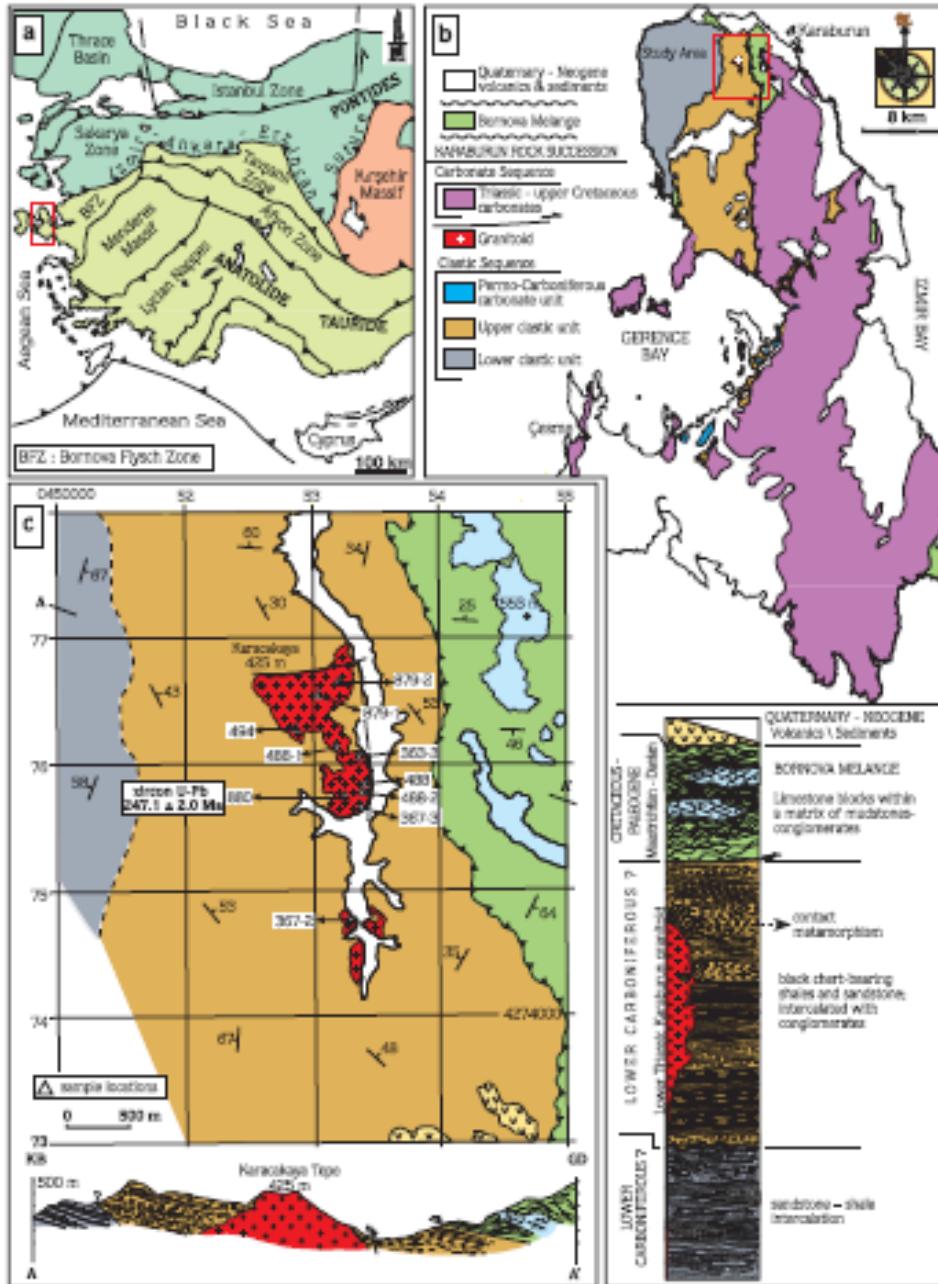
- Jeolojik zaman çizelgesi (dağıtılanacak)
- Jeolog çekici (veya başka bir çekic)
- Jeolog çantası(surt veya omuz çantası)
- Arazi defteri
- Kurşun kalem, 12 renkli kuru boyalı kalemleri
- Silgi
- Lup (veya başka bir büyütme)
- Örnek torbası (toplanaçak fosil ve kayaç örneklerini koymak için)
- A4 boyutunda kapaklı haritalık

Giyim-Kusam: Her türlü hava ve arazi koşullarına uygun (yağmurluk
ve/veya rüzgarlık, bot vb. gibi) kıyafet giyilmesi önerilir.

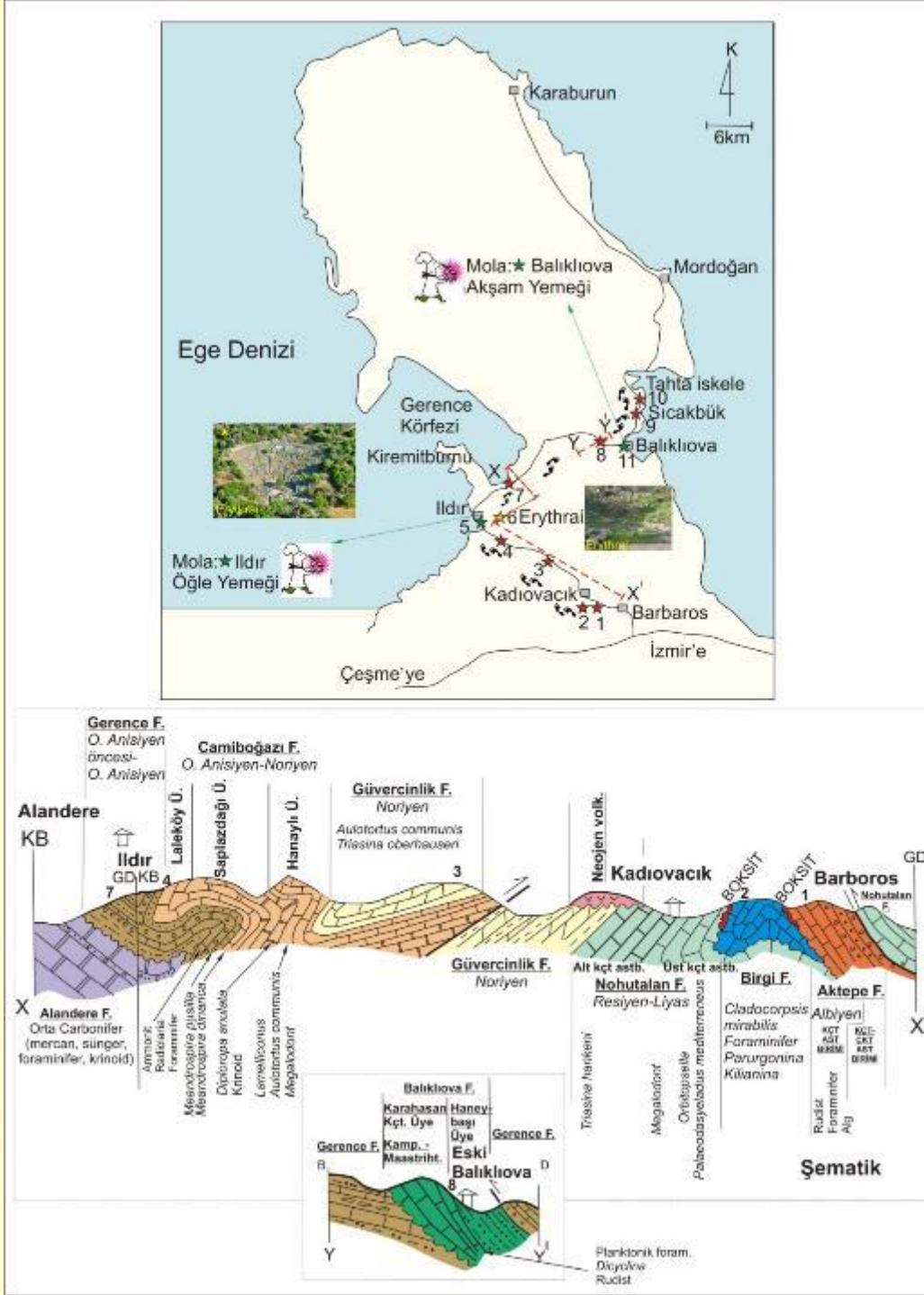
Kumanya: Herkez kumanyasını kendi getirecektir. Bununla birlikte
Güzelbahçe'de kumanya alımı için 10 dk mola verecektir. Ögle
yemeği arazide yenilecek ve Güzelbahçe'den sonra başka bir yerleşim
yerinde durulmayacaktır.

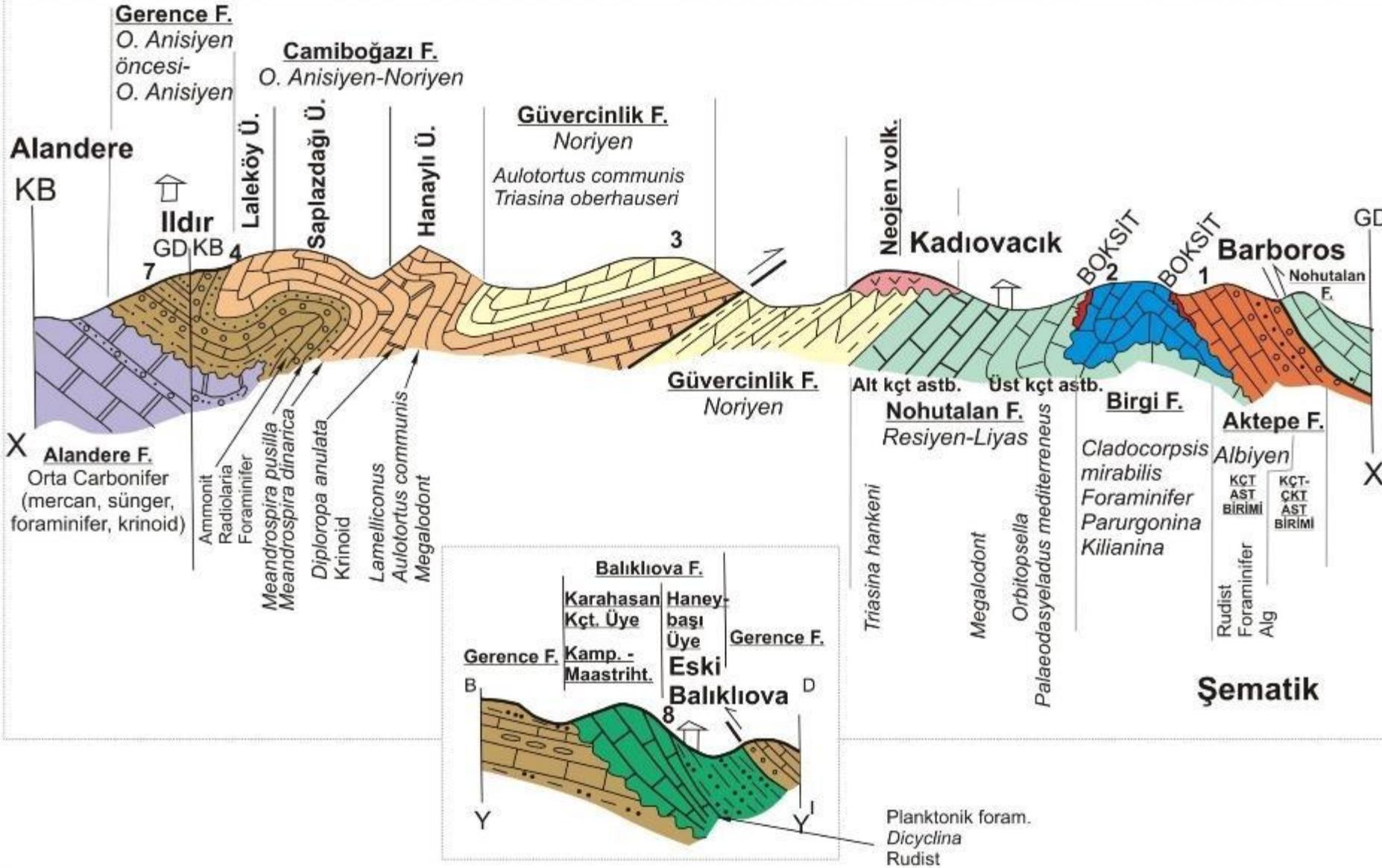
Prof. Dr. Funda AKGÜN, Dr. Öğr. Üyesi İsmail İŞİNTEK

247 Ma Granit



Akal ve diğ., 2010





Karaburun Yarımadası İldır Köyü

