DE: meteorites-; detection-.; stony-meteorites; Sweden-; geochemistry-; diagenesis-; materials-; conodonts-; biostratigraphy-; Ordovician-; fossil-meteorites; chromlte-; oxides-; geochemlcal-indieators; limestone-; carbonate-rocks; Scandinavia-; Western-Europe; Europe-; southern-Sweden,; Osterplana-; KinneJculle-; electron-probe-data; SEM-data; microfossUs-; metasomatism-

TI; **Mixing-zone** dolomites in **the** Golly **Oolite,** Lower **Carboniferous, South** Wales;. .->

AU: Searl-A

SO: Journal-of-the-Geological-Society-of-London. 145 (Part 6). p.. 891-S99.. YR: 1988

DE: Wales-; stratigraphy-; Cacboniferous-; sedimentary-petrology; sedimentary-rocks; geochemistry-; isotopes-;, carbonate-rocks-; limestone:-; oxygen-; 0-18/0-16; carbon-; C-13/C-12; Great-Britain; Uni ted-Kingdom; Western-Europe; Europe-; Dinantian-; South-Wales; doloraitic-limestone; petrography-; Gully-Oolite; stable-isotopes

TI: Stable isotopes In. the back, reef fades of the **Bonneterre and Davis formations** {Cambrian),,, MO; evidee.ee: for a complex **diagenetic history.**

AU: Gregg-Jay-M; Shelton-Kevin-L

SO: Abstmcts-with-Programs-GeoIogical-Sociery-of-America. 20.. (7). p. 120 YR: 1988

DE: Missouri-; sedimentary-petrology; diagenesis-" Bonneterre-Formation; Davis-Formation; Midwest-; United-States; geochemistry-; isotopes-; Cambrian-; carbon-; oxygen-; limestone-; carbonate-rocks; dolostone-; doJomin'zation-; mississippi-valley-type; mineralization-; mudstone-; clastic-rocks; **0-18/O-16;** stable-isotopes; C-J3/C-12

Tl: Kristalle als **Geothermometer und-barometer.**

AU: Paulîsch-Feter

SO: Zentralblatt für 'Geologie und Paléontologie. Teil I. **H.3.p.** 181-344. YR: 1990

LA: German

De: *Jadeite:* Para.gen.sis, crystal structure and. color, orientation in rocks and experimental deformation, experiments on jadeite forming, jade as: roughmaterial for the ait handwork, summary; *Amphibole:* Prefered orientation, of hornblendes, experimental hornblende - deformation, anisofropy of amphiboliles, crystal structure of the hornblende and faciès, aluminium., sodium, calcium, magnesium, iron, and titanium in hornblendes,, isotopes in hornblendes:, epitaxis, biopyriboles, hornblende rea.cti.ons in nature, experimental forming of amphiboles;, technical syntheses, summary; *Chloritoid:* Natural paragensis, with chloritoid, crystal structure: and polytyps, orientation von chloritoid in. rocks» experimental chloritoid-reactions, literature aut of lands, summary; *Staurolite* Paragensis, crystal structure .and epitaxis, orientation, experimental deform.ali.on, laboratory experiments: on the forming conditions, summary; *Titaniie:* Paragensis, age, form, crystal structure, experimental deformation and orientation,, titamite-syntheses, titanites in tectonic, summary; *Corundum:* Paragensis, form, and epitaxis, structure, color, orientation,, corundum-syntheses with, different mineral pairs, technic,, rubles, world wide,, summary; *Talc.* Paragensis:,, ore deposits, structure, laic:-synthesis:, technic,, summary; *Pkologopitei* Natural paragensis, crystal chemistry and poltyps, isotopes and trace elements, fluid inclusions» epitaxis, orientation and experiments of deformation, conditions of experimental forming, weathering, technic, summary.
(Özcan DORA)

Özler / Abstracts

Candan Gökçeoğkı, Hüsnü Aksoy, ***1996,*** *Landslide Susceptibility mapping of the slopes in ike residual soils of the Memgem region (Turkey) iff deterministic stability analyses* ***mud*** *image processing tecniqites:* .Engineering Geol.,44* 147-161,

Abstracts; The aim of present study is to prepare a landslide susceptibility map of a. region of about 120 km^2,,, between Gokcesu and Pazarköy (around Mengen, NW Turkey) at approximately 10 km .norm of tlie North Anatolian Fault Zone, where frequent landslides occur., For this purpose, mechanisms of the. lao.dsli.des were studied by two-dimensional stability analyses together with field, observations,,, and. the parameters controlling; the: development of such slides, were identified. Field observations .indicated that die failures, generally developed within, the uncoD.soli.da.ted and/or semiconsolidated soil units in forms of .rotational, successive shallow landslides within the weathered zone in. Mengen, Çukurca and. Sazlar formations* Although consisting of residual soils., Capak and Gokdag formations do not exhibit landslides as the natural slopes formed on theses, do not exceed, the: critical slope angles.. Statistical evaluations and distribution of the landslides on. the topographical map showed that such parameters as cohesion, angle of internal friction» slope:, relative height» orientation of slopes;, proximity to drainage pattern, vegetation cover and proximity to major faults were the common features on the landslides. Digital images, were obtained to represent, all these parameters on gray scale on 'the SPOT image and. on the: digital elevation model (DEM) of the ,area using image processing techniques. Soil mechanics tests, were carried ont on 36 representative samples collected from different units, and. parameters, were determined for' two-dimensional stability analyses basing on "sensitivity approach" and for' 'the preparation, of digital shear' strength map. In order' to determine the critical slope angles values for 'the residual soils,,, a series of sensitivity .analyses we« realized, by using two-dimensional deterministic slope stability analyses techniques for varying values of cohesion., angle of internal friction and slope height along with varying saturation conditions. According to the-results of the sensi.ti.vity analyses., the Mengen formation was found, to be most susceptible unit to landslides., covering about 33.5 % of 'the region studied, in terms of surface area... The distribution of the critical slopes were determined, by superimposing the -critical slope values from sensitivty analyses on slope map of the study area., On the other hand, Iso-cohesion and iso-friction maps were produced by locating 'the values of'Cohesion, and internal friction angles, in a geographic coordinate system such 'that they coincide with sample locations on the DEM and by further' .interpolation, of •the values concerned... The' pixel values were evaluated .in gray scale: from. 0 to 2,55,0 representing, the lowest pixel value and ,255 representing the highest. Sensitivity analyses on. 'Cohesion, and angle of internal friction, .investigate the effects of the parameters only on stability, revealed, that cohesion, was effective at. a rate of 70% by itself » while: angle of Internal friction alone controlled 'the stability by a rate of 30%. The Iso-cohesion. and iso-friction maps previously obtained were- digitally combined in these rates and a "shear strength map" was prepared. The geographic, setting of the: study area is such that northern slopes usually .receive dense precipitation, In relation to this fact, about 42% of the landslides, .are. due north.. Thus,, a slope orientation map was prepared using 'the DEM, and slo-

pes facing north were evaluated as being more susceptible, to sliding,. Proximity to the drainage pattern was another important factor' in. the evaluation, as streams could, adversely affect the: stability by either eroding the toe or- saturating the slope, or both. When considered together.,, in conjunction, with the field observations, faults and landslides showed a close association. In the area,,, about 88% of tine landslides were, detected within an .area closer than *250 m* to major faults,,, therefore, a. main discontinuity map was produced, using the SPOT image of the region, and "proximity to major faults" was. evaluated as a parameter as most, of the landslides developed in areas where the: vegetation was rather sparse. A vegetation cover map was therefore obtained from, the SPOT image,, and the areas with denser vegetation were considered to be. less susceptible to siding with, .respect, to the areas with less or no vegetation.. Having; prepared, the maps accounting, for the distribution of critical slopes,, shear strength properties, relative height, slope angle, orientation of the slopes, vegetation cover,,, proximity to the drainage pattern, .geographic, conetions were carried on each of these,,, and a. potential failure map was obtained for' the residual soils by superimposing all 'these maps. Next...,, a classification was performed on the final map and five relative zones of susceptibilty were defined... When compared with 'this, map, all of the landslides identified in the field were- found to be located, in the most susceptible zone... The performance of the method used in processing the images appears to be. quite high, the zones determined on. the map being the zones of relative- susceptibility.

Ernst JA. Leven, Aral .1; Okay, *1996 ƒFomminffera from the* ***exotic Permo-Carboniferotts limestone blocks in the Karakaya Comp&ex, Northwestern*** **Turkey: Mivlsia Italiana** di Falewitologia e Stratigrafia, 102» 2,139-174.

Abstract: Karakaya Complex in. northern Turkey is a tectonic .assemblage of strongly deformed Fenno-Triassic mafic volcanic and clastic rocks» representing subducdon-accretion complexes of the: Paleo-Tethys. It forms, an over 1000 km long discontinuous east-west trending belt, .and constitutes the basement to the little deformed Jurassic-Cretaceous sequence of tbePontides. In northwest Turkey four tectonic units are differentiated, within the Karakaya Complex. A basal metabasite-marble-phyllite sequence,,, an arkosic sandstone-oHsto-strome unit, a greywacke 'unit and a mafic lava-tuff-olistostrome unit.. The latter three units, comprise numerous, exotic- blocks of Permo-Carboniferous limestone .ranging up to one kilometre- in size. Foraminifera from over 180 blocks from these three Karakaya. Complex units are studied., many in oriented sections.. The rich- fusulinid and small foraminifer assemblage in the: blocks of the Karakaya Complex with three new fusulinid species, ***Triticites*** **(?)** ***kozakensis, PalaeofitsuHna (Paradunbarula) okayi*** **and** ***Palaeofitsulhta (Paradttnbartda)*** **ottomana, indicate** the presence of all the Carboniferous and Permian stages with the exception of Touroaisian» Kasimovian and Bolorian. However» 'the majority of the limestone: blocks -(>80%) are of Murgabian to Midian age. Compared to the Upper Paleozoic sequences from the Anatolide-Taurides, the limestone blocks, .in 'the Karakaya Complex are characterised by richer fusulinid assemblages.,, and a more complete synthetic sequence suggesting that they were deposited, to 'the north of the Anatolide-Tauride platform along the southern or northern margin, of the Pa~leo-Tetheys., The concentration of the olistostromes along the suture with the Anatolide-Taurides suggests, that the limestone blocks were derived from the southern .margin of the Paleo-Tethys., However, fusulinid assemblages of the Karakaya Complex show similarities to those- from orals,northern Pamir and. Darvaz, all thought to be located along, the northern margin of the Paleo-Tethys, suggesting .an opposing view. This could, be due to the narrow width of'the Permian. Paleo-Tethys in the Turkish paleo-longitöde, which might have obliterated faimal differences in fusulinid assemblages from both, sides of the ocean.

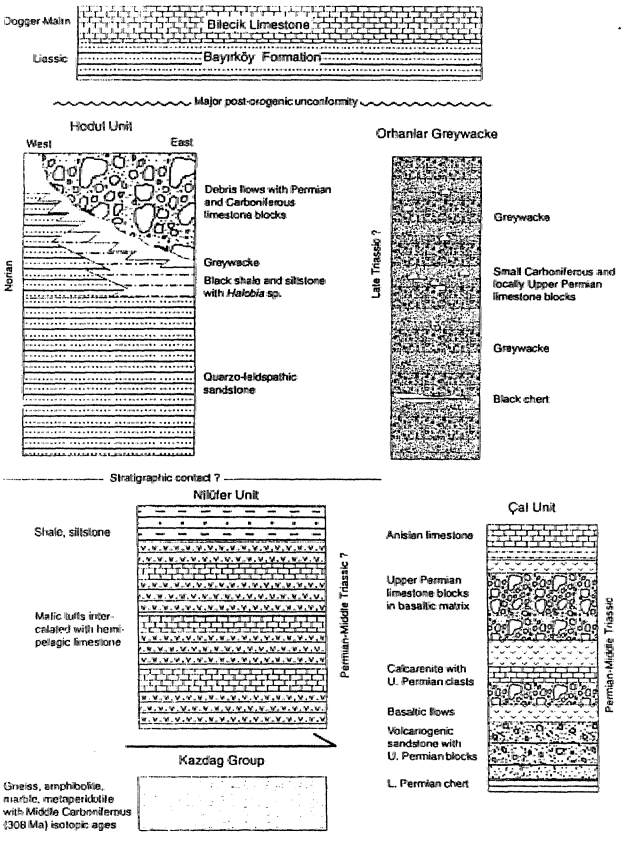


Figure 2. Genera lized synthetic stratigraphie columns of the Karakayta Complex (The Nilüfer, Hoduland Çal units and the Orhanlar Greywacke} and their tectono-stratigraphic position.

Nfldta Yu. Bragln, II. Kağan. Tekin, 1996, A^e *ofroàioUaù* ***an-ckert Mmks from the Senoniun Opliwlitk Mélange*** *(Ankam, Turkey):* Tie Island Arc, 5,114-122.

Ahimct: The Senonian Ophiolitic Meſange of the- Mélange Supergroup includes numerous blocks, of radiolarian cherts. These blocks contai|i various radiolarian assemblages from, the **Albian to' the: TuronİOT** ***(Pseudodictyomitra pseudomacrocephala, Thanarla veneta),*** **the Lower Cretaceous** ***(ThatarİIa conica, AMevium helenae, Pseudodictyomitra carpatica),*** **the Kimmeridgian-Tithonian** ***(Ristota altissima, Sethocapsa cetia, Podocapsa amphitreptera)*** **and the Lower Jurassic** *(Parahsuum simplum).* Upper No.ri.an radiolarians were obtained from, 'two of these blocks,. The assemblage is represented by *Betraccium deweveri* Pessag.no and Blome, ***Ferresiwn triquetrum*** **Carter,** ***Pylostephanidium ankaraense*** **n.** sp.. (Genus *Pylostephanidium* was formely •unknown in. the Upper' Triassic) and other taxa, Thus,, Upper Norian fauna of

Turkey exhibits close similarity to the radiolariaıı assemblages of western .North America,,, Eastern, Russia, Japan, and. the. Philippines.. This provides further evidence for the correlation of Mediterranean, and Pacific Triassic sequences., These data allow for the conclusion that the sedimentation of radioİarian cherts, was common in, this part of Tethys during 'the Late

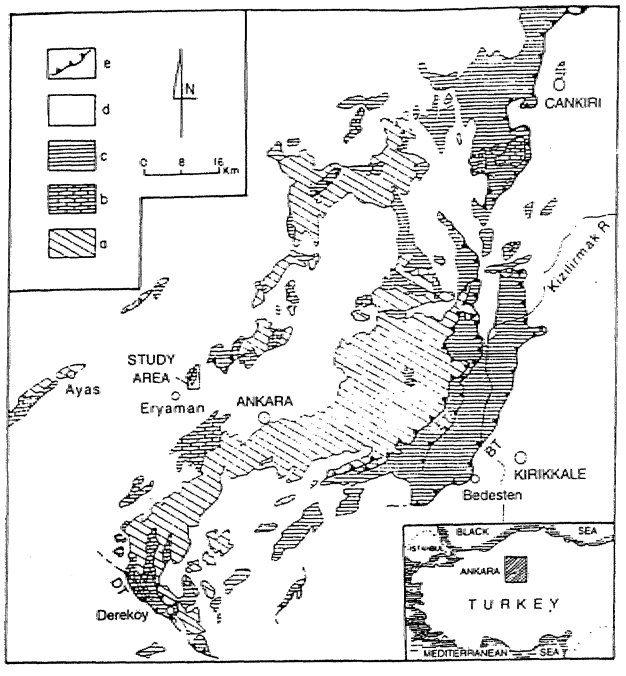


Figure 1, Geological map showing .major rock units of the Ankara mélange, (a) Pre-Liassic 'Karakaya Grotq'. (b) Jurassic-Cretaceous sedimentary sequence, (c) Senoman Ophioiiiic Mélange, (d) Tertiary-Recent cover rocks., (e) thrust to reverse fault.. BT; Bedesten Thrust Fault Zone, DT: Derekoy Thrust Fault Zone,,, ET: Elmadağ Thrust Fault Zone (Modified after Koçyiğit 1992}.,*

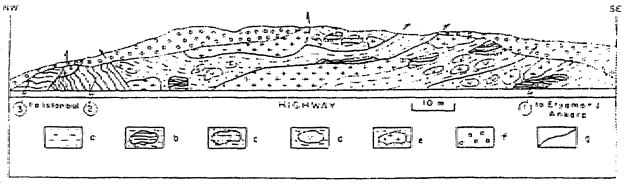


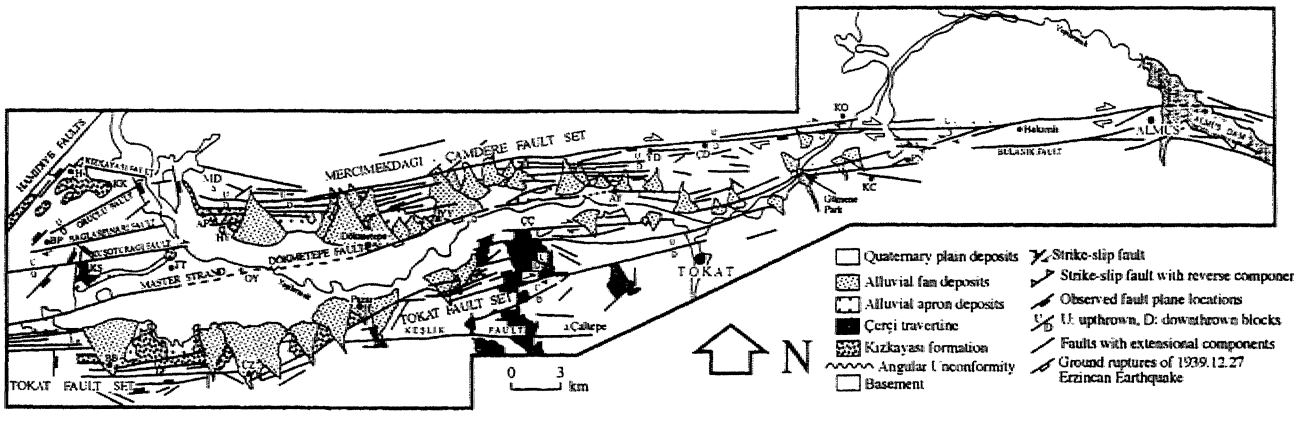
Figure 2. Generalized cross-section of a road-cut between Eryaman and İstanbul, (a) Volcamchstic matrix, (b) Blocks qfmudstone and chert with I, *Upper Triassic;* 2» *Lower Jurassic; 3, Kimmeridgian-Tithonian Radiolaria. (c) Blocks of limestones, (d) Blocks of volcanics. (e) Blocks ofserpentinized gabbro. (f) Tertiary-Recent cover rocks, (g) Tectonic contact.*

Triassic and the Jurassic.

Erdin **Bozkırt,** Ali Eoçylpt, 1:996, *The Kazova bmṁ: am active negative flower structure on the Atmus Fault Zorne» m splay faali system of ike North Am&toliam Fault Zone, Turkey:* **Tectonophyslcs,** 265,, 239-254,.

Abstract: The Kazova basin is located within, 'the Almus Fault Zone **(AFZ),** a splay fault system of the North Anatolian Fault Zone,'in the central Pontides, Turkey,. It is a, 0J-lO4rai-w.I.de, 60-km~long, wedge-shaped right-lateral strike-slip depression, bounded by the Mercimekdağı-Çarndere fault set in the north and the- Tokat fault set in the south. The- Kazova basin is superimposed on pre-Pliocene basement rocks while its. basin fill comprises the .Pliocene to' lower' Quaternary Ktzkayasi and Çerçi formations, and Quaternary al.uvi.als...

The Mercimekdagı-Çamdere and Tokat foult sets of (he AFZ, 'the basin-margin faults of the Kazova basin have a considerable amount of normal separation, and show a divergent character. Here.» 'the Kazova basin is interpreted .as an active negative flower structure.» where 'the combination of normal movement (extension.)' along the. different, segments of (he AFZ,,, and. the oblique extension between its. branching, splays resulted, from, a natural response to the anticlockwise rotation along the. AFZ. are suggested bashi-forrning mechanism. This, kind of basin, is fust reported from, Turkey although different types of strike-sip basins-, such, as. fault-wedge,, poll-aparts, 'Composite



FigMœ3. Neotectonic map of the Almus Fault zone.. ÄK= Ahurkèy; ,AP= Amqnnan; AY= Akyamaç; B,B= *Bahçebaşı; BP= Bağlarptnan; ÇÇ= Çerçi; ÇD= Çamdere; GP=- Giiiptmn; H= Hamidiye; HY=Hamayeri; İH= îîephamamı; KC= Korucak; KK= Kızkayası; KO= Kmlkö'y; KS= Kuşotumğı; MD= Mercimekdağı; OY= Ovayurt; PN= Pmarlı; SN= Sorgun; TT= Tatlıcak; OZ= Üziimeren; YD= Yayhdak; YY= Yeşilyurt,*