

OBVESTILO O RAZISKAVAH KREDNIH SEDIMENTOV V POSAVSKIH GUBAH

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Na območju Posavskih gub so bili doslej znani zgornjekredni sedimenti le v bližini Domžal ter v okolici Krškega in Velikega trna.

Na Gorjancih in v Krškem hribovju so našli Devidé, Pleničar, Ramovš in Zlebnik na več krajih kredne sedimente v razvoju scaglie in fliša, zato je bilo pričakovati, da so ohranjeni podobni sedimenti tudi na vmesnem prostoru med Domžalami in Krškim hribovjem.

Res se je posrečilo najti kredne sedimente na več krajih na območju litijske antiklinale. Dosedanja raziskovanja so pokazala, da je znaten del psevdofiljskih skrilavcev in peščenjakov z vložki apnencev zgornjekredne starosti. Poleg teh sedimentov, ki ustrezajo zgornjekrednemu flišu med Tolminom in Kobaridom, opazujemo ponekod še sivkaste in rožnate ploščaste laporne apnence z redkimi roženci. Ti apnenci leže normalno v bazi fliša; po svojem razvoju zelo spominjajo na »volčanske« apnence iz okolice Tolmina, ki so bogati z globotrunkanami in so po Devidéjevi spodnjesebonske starosti.

Sive in rdečkaste apnence z globotrunkanami sem našel najzahodneje v Posavskih gubah severno od Rašice pri Ljubljani. Poleg apnencev so ohranjeni flišni sedimenti, v katerih so značilni vložki apnenčevih breč. Vzhodno od Rašice so podobni apnenci ohranjeni pri vasi Dobeno. V zbruskih apnenca opazujemo številne radiolarije, globigerine in spikule. Na manuskriptni geološki karti Ljubljana 1:75.000 je Kossmat te sedimente prišteval psevdofiljskim plastem.

Apnenci z globotrunkanami, med katerimi je posebno številna *Globotruncana lapparenti lapparenti* Brotzen, in glineno laporni skrilavci z vložki apnenčevih breč, v katerih so pogostne miliolide, tekstularije in orbitoline, so ohranjeni severno od Kresnic med prelazom Grmače in vasjo Zapodje. Flišni sedimenti so razkriti tudi severozahodno od Slivne med Štebalijo in Kovačijo.

Laporje in laporne apnence z gümbelinami sem našel tudi v bližini Vač in vzhodno od Sv. Gore pri Kobiljeku.

Enaki sedimenti z globotrunkanami so ohranjeni na severnem obrobju laške sinklinale med Goričico in Kosezami. Večina teh sedimentov po dosedanjih geoloških kartah Ljubljana in Celje-Radeče merila 1:75.000 pripada ladinskim psevdofiljskim plastem.

V vzhodnih Posavskih gubah so ohranjeni sivkasti glinasti skrilaenci z vložki apnenčevih breč in peščenih apnencev vzhodno in severno od Bohorja in na Orlici. V apnenčevih brečah in peščenjakih so pogostne miliolide in orbitoline. Te sedimente je prišteval Dreger wengenu. Na tem območju zaenkrat še niso ugotovljeni apnenci z globotruncanami.

Na območju Posavskih gub so ohranjeni zgornjekredni sedimenti kot erozijski ostanki, kar kaže, da so bili nekoč mnogo bolj razširjeni; prekrivali so precejšnji del litijske antiklinale. Nadaljnje raziskave bodo pokazale, kako daleč so bili odloženi proti severu. Glede na podoben razvoj zgornjekrednih sedimentov v Posavskih gubah ter ob zgornji in srednji Soči je morala obstajati zveza med obema območjema. Erozijska je kasneje to zvezo prekinila.

NOTE ON THE INVESTIGATIONS OF CRETACEOUS SEDIMENTS IN THE SAVA FOLDS

In the Sava folds region Upper Cretaceous sediments have up to now been known only east of Domžale (northeast of Ljubljana, and in the environs of Krško and Veliki Trn.

Devidé, Pleničar, Ramovš and Žlebnik found in several localities in the Gorjanci-Mountains and Krško-Hills Cretaceous sediments of the scaglia and flysch facies. It has, therefore, been expected that similar sediments would occur also in the intermediate region between Domžale and the Krško-Hills. And, indeed, in the region of the Litija anticline Cretaceous sediments have been found in several places. Up to now investigations have shown that a considerable part of the Pseudo-Zilian slates and sandstones with limestone intercalations, is Upper Cretaceous in age.

Besides these sediments which correspond to Upper Cretaceous flysch between Tolmin and Kobarid also grayish and pink platy marly limestone with rare hornstones have been observed here and there. This limestone is usually overlain by flysch. Their facies resembles that of the Volče limestones from the environs of Tolmin which abound with foraminifera of the genus *Globotruncana* and are according to Devidé Lower Senonian in age.

Rašica (north of Ljubljana) is the westernmost locality in the region of the Sava folds where gray and reddish limestones with globotruncanas have been encountered by the present writer. Besides the limestones also flysch sediments with typical intercalations of limestone breccias occur. East of Rašica similar limestones are preserved near the village of Dobeno. In the thin sections of the limestone numerous Radiolaria and Foraminifera with *Globigerina* among them, have been observed. In Kossmat's handdrawn map of Ljubljana (1:75.000) these sediments are referred to the Pseudo-Zilian strata.

North of Kresnice between the Grmače Pass and the village of Zapodje there occur limestones with globotruncanas especially *Globo-*

truncana lapparenti lapparenti Brotzen and clayey and marly shales containing intercalations of limestone breccia with miliolids, textularias and orbitolinas. Outcrops of flysch occur also northwest of Slivna between Stebalijska and Kovačija.

The present writer found marls and marly limestones with *Gümbelinas* also near Vače and east of Sv. Gora near Kobiljek.

Similar sediments with *Globotruncana* are preserved at the northern margin of the Laško syncline between Goričica and Koseze. The present geological maps of Ljubljana and Celje-Radeče (1:75.000) refer these sediments to the Ladinian Pseudo-Zilian strata.

In the eastern Sava folds grayish clayey and marly shales with intercalations of limestone breccia and sandy limestones are preserved east and north of Bohor and on Orlica. The limestone breccia and sandstones contain numerous foraminifera of the families Miliolidae and Orbitolinidae. Dregger referred these sediments to the Wengen stage. In this region no limestone with *Globotruncana* has been found up to now.

In the Sava folds the Upper Cretaceous sediments are preserved in several places as erosion rests, a fact indicating that formerly the sediments were markedly more extensive. The location of Cretaceous sediments shows that they had covered a considerable portion of the southern Sava folds, i. e., the region of the Litija anticline. Since the Sava folds have as yet not been explored in full it is impossible to say how far northward the Cretaceous sediments extend.

In view of the fact that the facies of the sediments of the Sava folds is similar to that of the sediments encountered along the upper and middle course of the Soča River, it might be assumed that a connection must have existed between the two regions. The sediments which might indicate such a connection were eroded later.