have laminated, clotted, dendritic or homogenous macrofabric. They have a broad distribution and can grow in a variety of different environments such as hot springs, freshwater lakes, hypersaline lakes, reefs and other marine environments. This research focuses on microbialites associated to coral reefs.

Coral patch reefs in the Miocene Mahakam Delta in East Kalimantan (Borneo, Indonesia) grew in shallow marine turbid waters. These patch reefs developed from delta front to deeper (prodelta) settings in areas with temporary reduced siliciclastic input. Langhian reef deposits are well exposed in limestone quarries in the Samarinda area and locally include microbial carbonates. Two different types of microbial carbonates have been found around Samarinda in two localities 2 km apart.

These sections were logged in detail and 208 samples were collected. Meso and macrostructure of microbialites were identified at the outcrops. Thin sections from carbonate samples were examined under optical microscope and microfacies were classified using the DUNHAM (1962) and EMBRY & KLOVAN (1971) terms. The carbonate content was analyzed using Total Inorganic Carbon analysis, with 12% carbon as a standard for carbon calibration. In the northern section, microbialites occur as low-relief domes, up to 2 m wide and 0.5 m high, with internal lamination, developed around large coral fragments at the transition from reef deposits to fine-grained siliciclastics.

The second type of microbialites has been found in the southern locality as decimeter-scale nodules ('megaoncoids') formed around nuclei of large coral fragments. Small nodules were bound together into bigger nodules. Microbial micrite with laminated to digitated fabrics intergrew with coralline algae to form the thick covers of these 'megaoncoids', which laterally change into coral boundstones.

In both sections microbialites are not components of the reef framework. They grew around large coral fragments on the flanks of the patch reefs. The microbialites that form low relief domes developed on a nearly flat, stable seafloor seawards of the patch reef. The 'megaoncoids' in the southern section formed as a result of downslope movement of coral fragments coated by microbialite/coralline algal crust. The steep slope at the flank of the patch reef favoured falling and overturning of encrusted corals and continued growth of microbial crusts on other sides of nodules.

Lower Cretaceous calcareous algae from Herisht Mount (Ardakan area, Central Iran)

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In spite of the several publications in the last decade, little is known about Lower Cretaceous calcareous algae from Iran. The calcareous algae association described here adds to the knowledge on algal paleobiodiversity in Central Iran, and brings new insights into the regional paleogeographic framework during the Lower Cretaceous.

Herisht Mount is located 14 km north of Ardakan town (Central Iran). Geologically, the area belongs to the Yazd tectonic block. The studied section is about 640 m-thick; it contains conglomerates at the base followed by 40 m-thick limestones. They are covered by a 63 m-thick green shale level, followed by several hundreds of stratified limestones with mollusks, foraminifers, and calcareous algae.

The foraminiferal association with *Balkhania balkhanica* (Mamontova), *Charentia cuvillieri* Neumann, *Everticyclammina* hedbergi (Maync), *Dictyoconus pachymarginalis* Schroeder, *Mayncina bulgarica* Laug, Peybernes & Rey, *Mesorbitolina texana* (Roemer), *Praeorbitolina cormyi* Schroeder, *Sabaudia minuta* (Hofker), *Torremiroella hispanica* Brun & Canerot and *Vercorsella scarsellai* (De Castro), indicates a Barremian-Aptian age for the whole succession.

Green algae (Dasycladales and Bryopsidales) dominate the calcareous algae association, consisting of ?*Conradella bakalovae* (Conrad & Peybernes), *Cylindroporella ivanovici* (Sokac), *Deloffrella quercifoliipora* Granier & Michaud, ?*Griphoporella cretacea* (Dragastan), *Kopetdagaria sphaerica* Maslov, *Montiella*? *elitzae* (Bakalova), *Morelletpora turgida* (Radoicic), *Neomeris* cf. *cretacea* Steinmann, *Salpingoporella* cf. *muehlbergii* (Lorenz), *Salpingoporella* sp., *Terquemella* div. sp., *Arabicodium* sp., *Boueina hostetteri* Toula, *Boueina* sp., ?*Halimeda fluegeli* Bucur, *Permocalculus* cf. *irenae* Elliott and *Permocalculus minutus* Bucur. The green algae are rarely accompanied by red algae: *Marinella lugeoni* Pfender, *Parachaetetes asvapatii* Pia, *Pycnoporidium* sp., *Polystrata alba* (Pfender) or the microproblematic *Carpathoporella occidentalis* Dragastan.

The algae association from Herisht Mount contains several species that were previously identified in Aliabad area (south-west from Yazd, BUCUR et al., 2012); exception is made by *Morelletpora turgida*. Nevertheless, the latter has been also identified in samples from Khur region (see Bucur et al., this volume), thus it can be considered as a common species for the whole Yazd tectonic block.

This algae association developed in depositional environments ranging from internal shelf to shelf margin. The presence of the identified species, corroborated with the absence of species *Salpingoporella dinarica* indicates a paleogeographic affinity with the central-northern Tethys domain during the Lower Cretaceous.

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Late Cretaceous (Maastrichtian) dasycladalean algae from the Naghan area (Zagros Mountains, SW Iran): Preliminary results

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In the Zagros Mountains of southwest Iran, Campanian-Maastrichtian shallow water limestones that locally may pass the K/T boundary are known as Tarbur Formation. Biostratigraphic zonations of the Tarbur Formation are based on larger benthic foraminifera. The study area is located approximately 50 km south of Naghan town near Gandomkar village. Within the Early-Middle Maastrichtian interval of the Tarbur Formation, inner platform wackestones contain a rather diverse association of dasycladalean algae with *Uteria* sp., *Salpingoporella* div. sp., *Pseudocymopolia anadyomenea* (Elliott), *Cymopolia* sp. and further undetermined taxa currently under study. The material studied contains well-preserved specimens of *P. anadyomenea*, the type-species of the genus *Pseudocymopolia* Elliott