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Regional Implications of Ypresian Flysch Sequence From South of Marmara Sea: Structural, Stratigraphic and Paleontological Data

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The study of a Ypresian flysch sequence, immediately southern of the Intra-Pontid suture zone and overlying the Upper Cretaceous basement rocks, permit us to comment on the late Cretaceous-early Tertiary tectonic history of the region This flysch sequence with a thickness 1500-2000 m consisting of sandstones, shales and conglomerates derived from the Upper-Cretaceous basement rocks. These clastics are intercalated with andesitic tuffs, pyroclasts, agglomerates and lenticular limestones. The flysch contains some larger foraminifera levels including Orbitoclypeus douvillei douvillei, O. douvillei yesilyurtensis, O. schopeni ex. interc. suvlukayensis-crimensis, O. schopeni crimensis, O.munieri munieri, Asterocyclina alticostata cf. gallica, , Discocyclina fortisi simferopolensis. The Ypresian flysch overlies a unit which consists of quartz conglomerate and boulders, chert, serpentinite , metamorphic rock blocks and conglomerates. Some think this unit to be a debris flow, but the range of rock types, the style of deformation and the its areal extent clearly shows it could be a mélange.
Gravity flows like mudflows, slump folds and NW-SE trending anticline and synclines are observed and mapped in Ypresian flysch which suggest that it was tectonized during or soon after deposition. Anticlines, synclines and north-nortwest dipping thrust faults point SE vergance in the region. Also earlier published apatite fission track data from metamorphic rocks cropping out at south of Marmara Sea shows that nearby areas uplifted during Early Eocene ($\sim$ 52 Ma). We suggest that there are two probable sources for this tectonism in northwest Turkey; the compression related to the consumption of the Intra-Pontide Ocean in the north or the Late Cretaceous-Paleocene collision of Pontides and Taurides in the south.