# Stop A1/3

## STRUBACH SECTION

**Hans Egger**

**Topics:**

Hemipelagic sedimentation in the Paleocene

**Tectonic unit:**

Rhenodanubian Flysch Zone

**Lithostratigraphic units:**

Rhenodanubian Group, Acharting Formation, Strubach Tonstein

**Cronostratigraphic units:**

Danian to Thanetian

**Biostratigraphic units:**

Calcareous nannoplankton Zones NP3 to NP8

**Location:**

Strubach creek

**Coordinates:**

E 013° 01′ 06″, N 47° 54′ 12″

**References:**

Egger 1995, Egger et al. 2005

**Figure A1.19 ▲**
Acharting member

In the upper Maastrichtian and Danian the Acharting Member of the Altlengbach Formation is characterized by thin- to medium-bedded turbidites which display base-truncated as well as complete Bouma sequences (Fig. A1.19). Usually the upper part of the Bouma sequences consist of medium-grey clayey marlstone, which represents c. 35 % of this member whereas the percentage of intervening green coloured hemipelagic claystone layers is less than 15 %. A distinct feature of this turbidite facies is the intercalation of thick-bedded and coarse grained sandstones with high amounts of mica and quartz. These are marker beds for mapping the Altlengbach Formation. Calcareous nannoplankton zone NP3 was found in a sequence of very thin-bedded and fine-grained turbidites. Further up-section, hemipelagic claystone (Strubach Tonstein) becomes the dominant rock-type and turbidite layers are much less frequent than below. This 50 m thick claystone-rich interval is also regarded as part of the Acharting Member and comprises Zones NP3 to NP8.

Interestingly, clay mineral assemblages of the Strubach Tonstein display high amounts of chlorite indicating a strong increase in bed rock erosion. In addition, the bulk rock composition of the hemipelagic shales displays an increase in the percentages of detrital quartz and feldspar of about 10 %. The concurrence of indications of increased mechanical erosion in the composition of interturbidite layers and a dearth of turbidite sedimentation indicates a steepening of relief and a synchronous change of drainage patterns. Tectonic uplift and associated block faulting, which cut off the basin from the source area of turbidity currents are the most likely interpretation of the observed sedimentary features (Egger et al., 2002). This interpretation is supported by the identification of slope basins in the Ultrahelvetic nappe complex (Egger & Mohamed, 2010 – Stop A2/4). These basins were formed from the Late Maastrichtian on and acted as sediment traps, which prevented the entering of turbidity currents into the main basin.

**Figure A1.20 ▲**
Strubach Tonstein