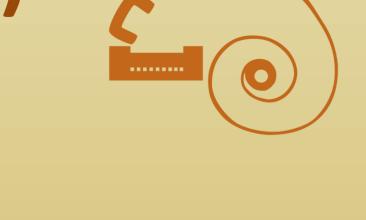


New Triassic dasyleptids (Insecta: Archaeognatha: Monura)

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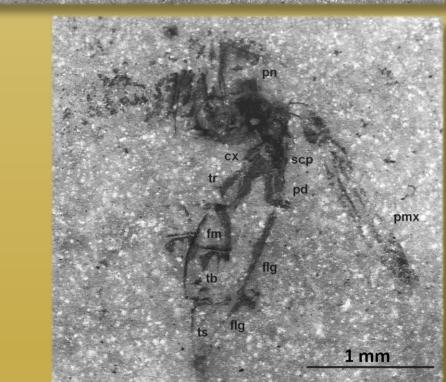
Dasyleptidae, or monurans, an extinct group of apterygote bristletail-like insects, were a typical faunal element of the Carboniferous and Permian sea shores and swamps.

Recently, Bechly & Stockar [1] described Dasyleptus triassicus from the Ladinian (Middle Triassic) Meride Limestone of Monte San Giorgio in Switzerland. It was the first described Mesozoic record of the group, but not the sole one known so far.

Monura were first reported from the Triassic ('Gres a Voltzia', Vosges) by Marshal-Papier [2], but this record based on a single incomplete specimen was not mentioned in subsequent publications. Later, several complete specimens were found in the Louis Grauvogel collection, housed in Université Louis Pasteur, Strasbourg (D. Shcherbakov, pers. comm.), but they remain unstudied.



Dasyleptus triassicus Bechly et Stockar, 2011, holotype



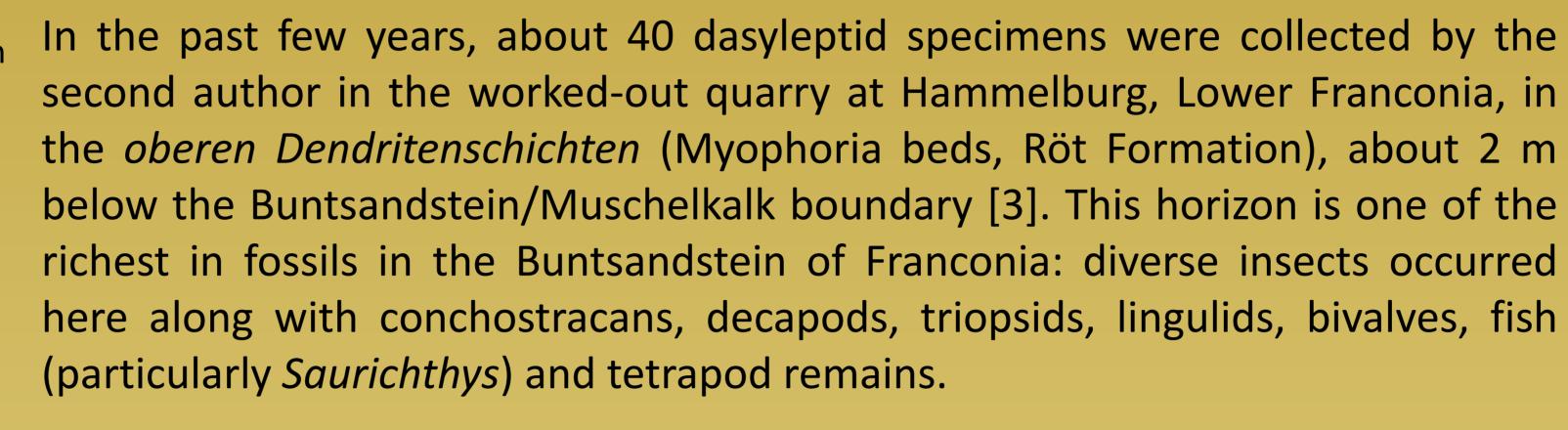
Triassic records of dasyleptids in Europe:

1 – Vosges: 'Grès à Voltzia' Fm,

2 – Franconia: uppermost Röt Fm

Upper Buntsandstein early Anisian

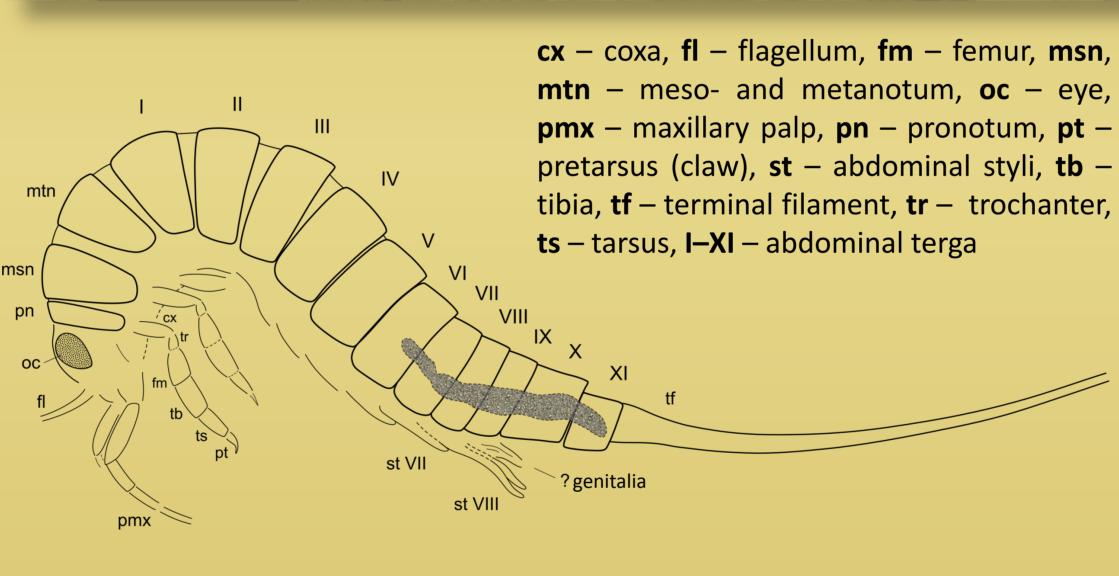
3 – Monte San Giorgio: Meride Limestone, late Ladinian





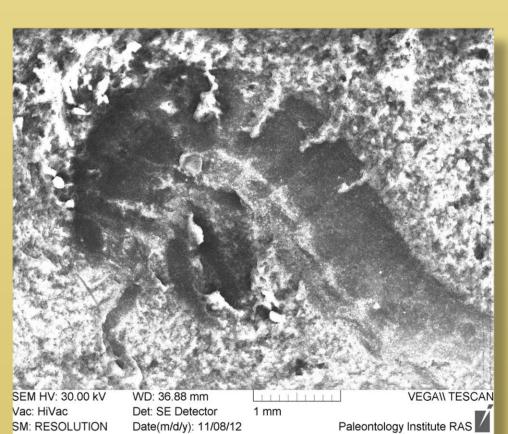
A pair of undescribed dasyleptids in the Louis Grauvogel collection. 'Grès à Voltzia' Fm of Vosges Mountains. Photo by D. Shcherbakov, 2008

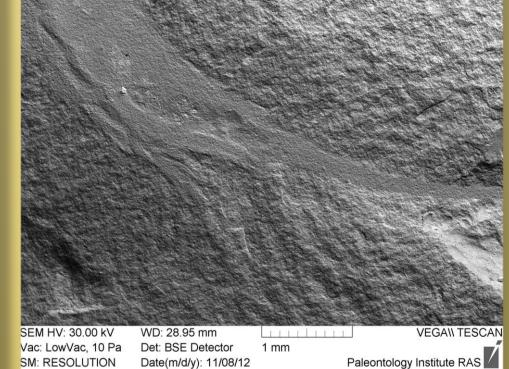




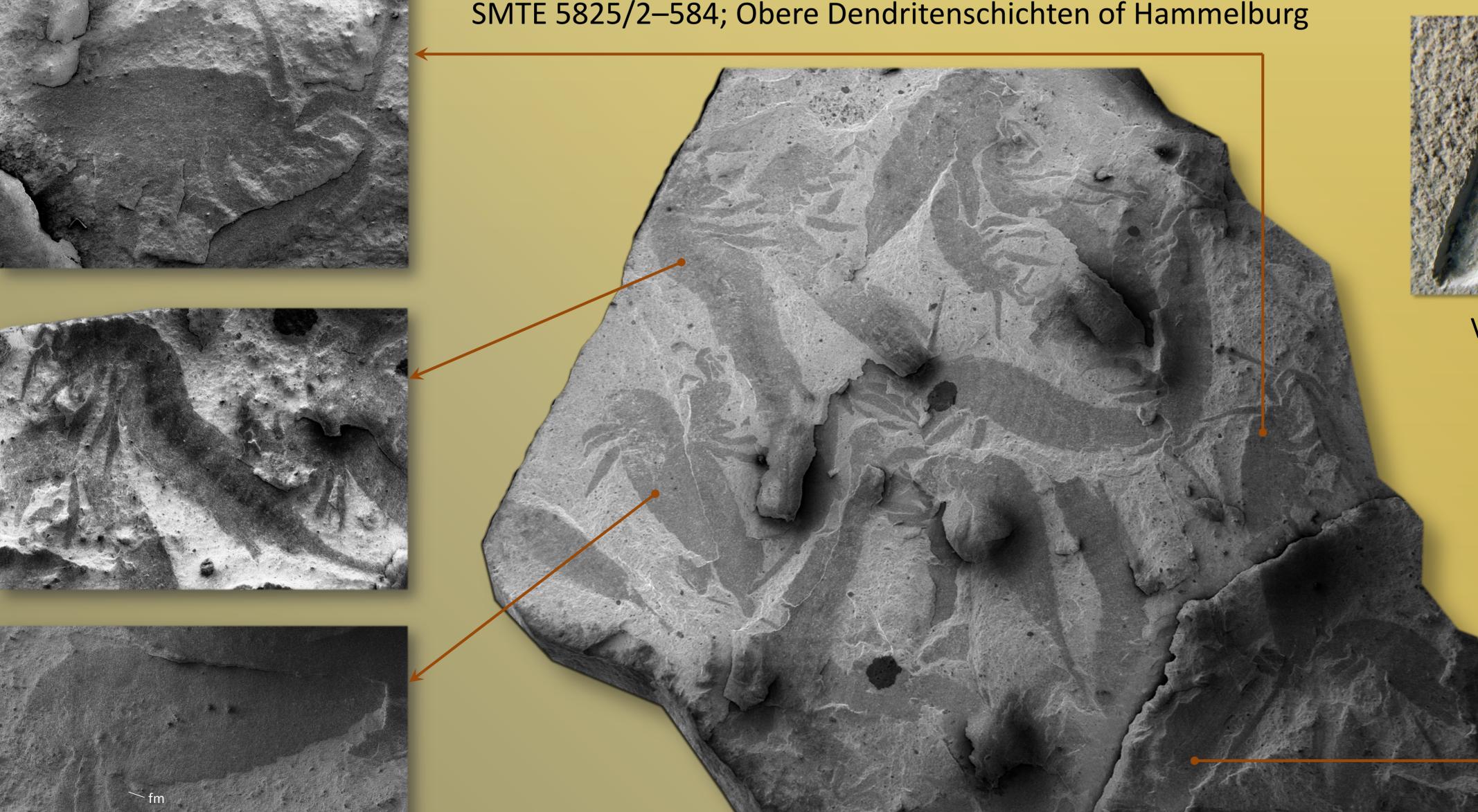
A mass burial, comprising about 20 specimens of *Dasyleptus*

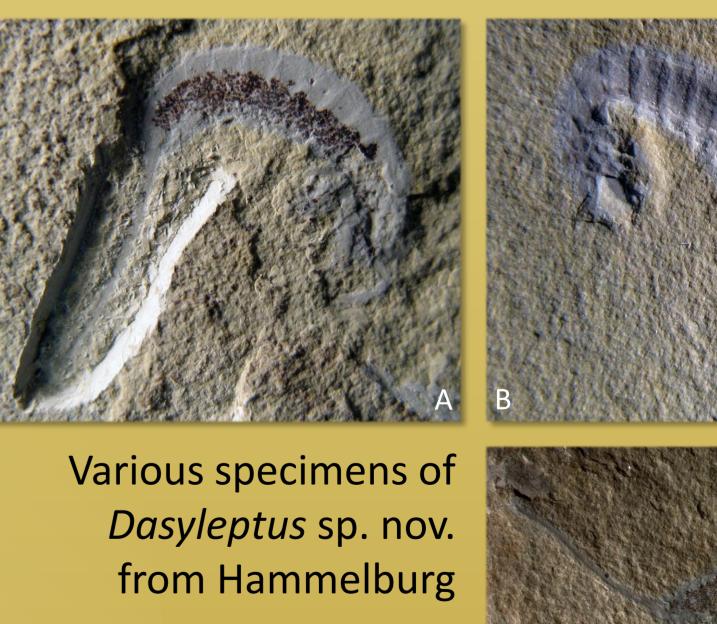
These dasyleptids belong to a new species, which is most similar to the *Dasyleptus triassicus* and differs from it in the shorter terminal filament (not longer than abdomen), as well as in body and leg segments proportions. Legs distinctly broadened (flattened?), but less so than in D. triassicus (not broadened in the Palaeozoic species). These and other characters are in need of further analysis.





SMTE 5825/2–593, SEM images (without coating)





A) SMTE 5825/2-663 B) SMTE 5825/2-664 C) SMTE 5825/2-436 D) SMTE 5825/2-364





A wing referred to the Palaeozoic protorthopterous family Psoropteridae (D.S. Aristov, pers. comm.)

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[1] Bechly G.& Stockar R. 2011. The first Mesozoic record of the extinct apterygote insect genus Dasyleptus (Insecta: Archaeognatha: Monura: Dasyleptidae) from the Triassic of Monte San Giorgio (Switzerland). *Palaeodiversity*. 4: 23–37.

[2] Marchal-Papier F. 1998. Les insectes du Buntsandstein des Vosges (NE de la France). Biodiversité et contribution aux modalités de la crise biologique du Permo-Trias. PhD thesis. Université Louis-Pasteur, Strasbourg, France.

[3] Bashkuev A., Sell J., Aristov D., Ponomarenko A., Sinitshenkova N., & Mahler H. 2012. Insects from the Buntsandstein of Lower Franconia and Thuringia. Paläontol. Z. 86: 175–185.