http://geology.19thcenturyscience.org/books/1902-Geikie-Geology/README.htm

rine, brackish, and fresh-water deposits occurs, which has been arranged by Fridolin Sandberger as follows:[88]

Pliocene—
- Uppermost brown-coal.
- Bone-sand of Eppelsheim (Deinotherium sand), see p. 1668.

Miocene—
- Clay, sand, etc, with leaves.
- Limestone with Litorinella (Hydrobia) acuta, Helix moguntina, Planorbis, Dreissena, etc.
- Corbicula beds with Corbicula Faujasii, Hydrobia inflata, H. acuta.
- Cerithium limestone and land-snail limestone.
- Sandstone with leaves (Cinnamomum, Sabal, Quercus, Ulmus).

Oligocene (see p. 1628).

The lower Miocene beds of this area present much local variation, some being full of terrestrial plants, some containing fresh-water, and other brackish-water and marine shells, indicating the final shoaling of the Oligocene fjord which ran down the upper valley of the Rhine as far as Mainz. Among the plants are species of Quercus, Ulmus, Planera, Cinnamomum, Myrica, Sabal, etc. The land-snail limestone contains numerous species of Helix and Pupa, with Cyclostoma and Planorbis. The Cerithium limestone contains marine or estuarine shells, as Perna, Mytilus, Cerithium (C. Rahtii, C. plicatum), Nerita. Among the various strata, bones of some of the terrestrial mammals of the time occur (Microtherium, Palæomeryx). The Litorinella limestone, the most extensive bed in the series, is composed of limestone, marl, and shale, sometimes made up of Hydrobia (Litorinella) acuta, in other places of Dreissena (Tichogonia, Congeria) Brardi, or Mytilus Faujasii. Abundant land and fresh-water shells also occur. Of greater interest are the mammalian remains, which include those of Deinotherium giganteum, Palæomeryx, Microtherium, and Hipparion (Hippotherium). The flora of the higher parts of the Miocene series includes several species of oak and beech, also varieties of evergreen, oak, magnolia, acacia, styrax, fig, vine, cypress, and palm.

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[88] "Untersuchungen über das Mainzer Tertiärbecken," 1853; "Die Conchylien des Mainzer Tertiärbeckens," 1863.