Paleoneurology, the study of the evolution of the brain, lies at the interface of neurology and paleontology. In its modern form, it was founded in Germany in the 1920s, the product of the unique educational background and inspiration of Ottilie (“Tilly”) Edinger (1897–1967). Before Edinger's work, the history of the vertebrate brain was reconstructed almost exclusively by anatomists who compared the soft tissue brains of living fish, amphibians, reptiles, birds, and mammals. Structural variations among extant groups were documented and compared; their distribution was used to suggest the sequence of anatomical innovations in time. With strong preparation in both neurology and paleontology, Edinger was able to integrate comparative anatomy and the paleontologists' tool of stratigraphic sequence. More than anyone else, she introduced the concept of time to neurology, creating modern paleoneurology.

Here we relate the broad outlines of Tilly Edinger's life and describe how she changed the way that the evolutionary history of the vertebrate brain is reconstructed and understood. Her story is particularly compelling because she began much of her innovative work while she was enduring Nazi racial laws and terrors, completing it in exile after forced emigration from Germany.

**Early biography and founding of paleoneurology**

Tilly Edinger (Figure 1) was born in 1897 into an extended and well-to-do family that was part of the academic and cultural elite of Frankfurt am Main. Her father, Ludwig Edinger, was a pioneer comparative neurologist and the founder of Frankfurt's first neurological research institute (Kreft 1997). Before his early death in 1918, Edinger (Figure 1) provided his daughter with many contacts within the local and greater scientific community and with a role model for a life in science. She was educated first at home by private tutors, among them French and English governesses who instilled in her a lasting interest in foreign languages, and then at the Schiller-Schule, at that time the only secondary school for girls in Frankfurt.

Tilly Edinger's scientific interests led her to university studies in zoology and, later, in geology and paleontology. During preparation of her doctoral dissertation on the palate of the Mesozoic marine reptile Nothosaurus, Edinger encountered a skull with a natural brain cast. Such "fossil brains" are actually natural casts formed by sediments that filled the empty cranium of the animal after death and then became lithified. They can reflect the external features of brain anatomy in great detail. The description of the Nothosaurus specimen (Figure 2) was the subject of Edinger's first publication in 1921 (Edinger 1921). After attaining her degree, she worked as an unpaid volunteer at the Geological-Paleontological Institute of the University of Frankfurt (1921–1927) and later as the section head in vertebrate paleontology at the Senckenberg Museum (1927–1938).

Although she lacked close scientific mentors in Frankfurt, Edinger did have contacts with two eminent vertebrate paleontologists, Friedrich von Huene (1875–1969) in Tübingen and Louis Dollo (1857–1931) in Brussels. Dollo advised Edinger during her biannual three-day visits to Brussels and through letters, exchanged in both directions each week from...