

Leopold-von-Buch-Plakette verliehen an Prof. Dr. Xavier Le Pichon

Xavier Le Pichon is considered one of the founders of modern plate tectonics. He is one of the men of the first hour of this new theory in the 1960s. In 1968 he developed a world map in which the relative movements of the large lithospheric plates were recorded. Each plate was provided according to the movements on a sphere with a rotation pole and the associated angular velocities. Based on this map, a much better understanding of the geometric relationships and the distribution of earthquakes and volcanoes was possible. Finally, the reconstructed motion vectors also provided an opportunity to reconstruct the geological past, which could then be tested and verified using magnetic stripe patterns. Early on, Xavier Le Pichon, together with his colleagues Jean Bonnin and Jean Francheteau, published a textbook on plate tectonics, which was to become the first and a standard work for the still-young theory (Le Pichon, Francheteau, J. & Bonnin, J. (1973): Plate Tectonics: 314 p.; Elsevier).

During his research work, Xavier Le Pichon became one of the leading scientists dedicated to deep-sea exploration using deep-sea submersibles. In numerous dives he was able to observe the structures hidden in the deep sea in the places that are so important for plate tectonics, such as the mid-ocean ridge or transform faults and later in deep-sea trenches. He was one of the leading scientists in the famous Franco-American diving project FAMOUS (French-American Mid-Ocean Undersea Study), which he led with James Heitzler and Claude Riffaud. Member of the scientific party of this project was also Robert Ballard, who years later was the discoverer of the Titanic wreck. Xavier Le Pichon was also particularly interested in the fluids and their effects on earthquakes as an expression of plate tectonic movements and the interaction of geophysical, geological and geochemical processes, especially at convergent plate margins.

Xavier Le Pichon was born in 1937 in Quy Nhon, Vietnam, which at this time was still under French protectorate administration. He graduated in 1959 in physics at the University of Caen in Normandy. He began his scientific career



at the Columbia University in New York, USA, and earned his doctorate in 1966 at the University of Strasbourg in Alsace. Already in 1969 Xavier Le Pichon took over the management of the geological department at the Centre d'Océanologie in Brest. In 1978 he became a professor at the Pierre et Marie Curie University in Paris and from 1986 to 2008 he took over the chair of geodynamics at the Collège de France in Paris.

Xavier Le Pichon has received many honours for his ground-breaking research, including the 1984 Maurice Ewing Medal of the American Geophysical Union, the 1991 Wollaston Medal of the Geological Society of America, the 2002 Balzan International Prize and others more. In 1985 he became a member of the Académie des Sciences in Paris and was appointed Knight of the Legion of Honour. The German Geological Society (DGGV) is very pleased to welcome Xavier Le Pichon among the group of awardees as recipient of the Leopold-von-Buch-Plakette in 2019. Congratulations!

Martin Meschede, Greifswald