

**Actualistic research in Germany -
focussed on marine geology**
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Marine geology starts in earnest with geologists diving, going to the coast and to sea and looking for the processes which helped produce the marine rocks with which they were familiar on land. Such work, obviously began in the intertidal and in easily accessible shallow waters.

The German geologist JOHANNES WALTHER (1860 - 1937) was a pioneer in these types of studies. Firmly rooted in classical geology, he set an outstanding example of applying uniformitarianism / actualism, that is, Hutton's doctrine that observable processes are sufficient to explain the geologic record ("Lithogenesis of the present" (Jena 1894, in German: "Bionomie des Meeres" 1893). Before World War II these approaches were followed for example by JOHANNES WEIGELT (1924 etc, Biostratonomy), RUDOLF RICHTER (1928 etc, "Actualistic Paleontology") or WOLFGANG SCHOTT (1935, Pleistocene climatic variations).

Afterwards many German institutions and geologists developed similar activities, in KIEL (with EUGEN SEIBOLD and MICHAEL SARNTHEIN etc: and with JÖRN THIEDE and ERWIN SUESS etc), HANNOVER (with ULRICH VON STACKELBERG etc), GÖTTINGEN (with DIETER MEISCHNER etc), WILHELMSHAVEN (with HANS ERICH REINECK and BURGHARD WALTER FLEMMING etc), BREMERHAVEN (with DIETER FÜTTERER etc), and BREMEN (with GEROLD WEFER etc).

Increasingly the limiting factor for actualistic approaches became evident, e.g. the special situation of the present as a short interglacial: High sealevel stands influenced by continental icesheets and therefore influencing many Air - Sea - Seafloor - Interactions from the coasts and river mouths to the Deep Sea, together with climatic zonation.