

### **Important Historic Biogeographers**

(taken directly from <http://www.wku.edu/~smithch/chronob/homelist.htm>)

#### **Matthew, William Diller (Canada-United States 1871-1930) - vertebrate paleontology, zoogeography**

Matthew was both the most important vertebrate paleontologist and the most influential zoogeographical theorist of his time. His clarifications of mammalian phylogeny (most famously, of horses) are still respected today, for he was a careful worker with training in field geology practices that usefully complemented his knowledge of comparative morphology. Some of Matthew's views were based on those of Alfred Russel Wallace: for example, he expressed doubt as to the existence of advanced extraterrestrial life, and a predilection for using dispersal to explain existing distribution patterns. Matthew was completely devoted to the study of mammals, and this emphasis eventually proved unwise when he attempted to dwell on it to debunk competing theories--for example, Wegener's continental drift hypothesis, which postulated changes that had been initiated before the main recent (Tertiary) radiation of mammalian types. On the basis of the evidence he had available to him, Matthew attempted to argue that vertebrates in general had originated in the climatically more challenging northern zones, and then dispersed in waves to fill the niches of more southerly-lying lands (this perspective is set out in his most famous work, "Climate and Evolution"). This idea has proved to be in substantial error; still, his unsurpassed knowledge of vertebrate paleofaunas and ability to closely argue the evidence convinced many (including protégés such as George Gaylord Simpson) to become followers. The theory was in fact able to maintain itself as the standard explanation until the plate tectonics revolution of the 1960s. Matthew was also an influential museum administrator and an effective science popularizer--but here too he was responsible for a number of museum display strategies that, while innovative for their time, sometimes gave oversimplified impressions, and which in recent years have fallen into disfavor.

#### **Troll, Carl (Germany 1899-1975) - phytogeography**

Carl Troll was one of the twentieth century's most influential physical geographers, both as an innovative thinker and researcher, and as perhaps the single most important person helping to get German geography--once by far the world's leading school of thought on the subject--back on track after the years of Nazi domination of that country. Troll was already a well-established scientist when he published his landmark 1939 paper introducing the concept and term *Landschaftsoekologie*, which became even better known in its English translation as "landscape ecology." Originally trained as a von Humboldt-influenced botanist, his interests, like Humboldt's, extended to most of the now recognized areas of physical geography, with a decided leaning toward phytogeographical and ecological subjects. He was especially known for his work in periglacial geomorphology, glaciology, high altitude studies, air-photo interpretation, microclimatology, soil structure, ecozonation, plant physiognomy, and, in general, for his systems-level approach to his subjects. An anti-Nazi, Troll managed to survive the war years and in 1947 established at his own expense the journal *Erdkunde*, a leading geography title (he would later found several more titles). He left behind several monographic studies, and several hundred shorter works.

#### **Watson, Hewett Cottrell (England 1804-1881) - phytogeography**

Watson led a fairly unremarkable life (he only once traveled outside of Britain), yet became regarded as an authority on English botany after in early life cultivating strong interests in phrenology and evolutionary theory. Wealthy enough after an inheritance to not need a profession, he fell into an involvement with phrenology circa 1825 that only ended in 1840 when he failed as owner and editor to make the *Phrenological Journal* a success. In the following years, and while his reputation as a botanist steadily grew, he began collecting evidence for, and defending, the idea of species transmutation; later Charles Darwin would acknowledge some considerable debt to Watson as a source. Watson's many writings on plant geography included a considerable number of innovations; for example, he organized incidence data by county-level aggregations, related environmental circumstances to distribution patterns,

differentiated between natural and anthropogenic origins, and made effective use of the concepts of "station" and "habitat."

**Mason, Herbert Louis (United States 1896-1994) - botany, phytogeography**

Mason's research is well summarized in an online entry from 1994, University of California: In Memoriam: "Although a self-professed taxonomist, Mason was always more interested in the causes underlying plant evolution and distribution, both past and present, than he was in details of classification. His efforts shifted more and more to what he termed 'plant geography' to distinguish it from the then mainstream plant ecology, which was for many years dominated by the ideas and overblown terminology of F. E. Clements. Mason stressed the direct relationship of environmental factors to the varied tolerance capacities of the plants comprising a given community, and rejected the almost organismal interpretation of 'associations,' 'climaxes,' and other phytosociological abstractions." Mason was an especially respected teacher, and served as president of several Western U. S. and national scientific societies.

**Other important people:**

Haeckel, Ernst (Germany 1834-1919) evolutionary biology, zoology

Hooker, Joseph Dalton (England 1817-1911) botany, phytogeography, floristics

Humboldt, Alexander von (Germany 1769-1859) physical geography, natural history

Hutchinson, George Evelyn (United States 1903-1991) ecology

Huxley, Thomas H. (England 1825-1895) zoology, evolutionary biology, philosophy

Lyell, Charles (England 1797-1875) geology

Mayr, Ernst W. (Germany-United States 1904-2005) evolutionary biology, ornithology, systematics