

Helmut Becker

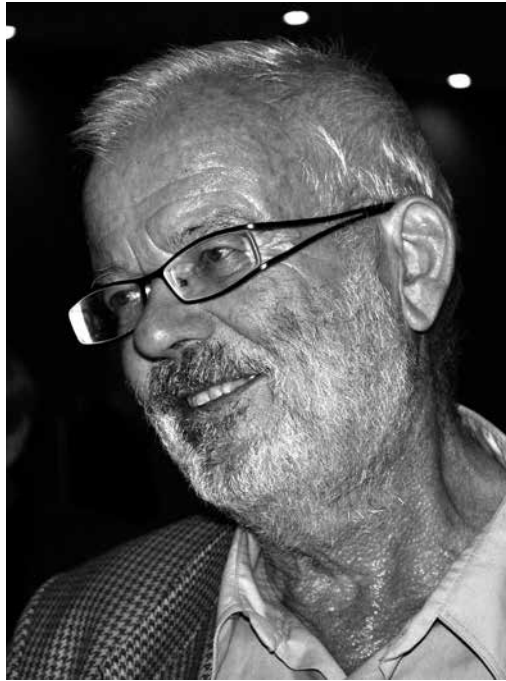


Photo: T. Herbich

Helmut Becker is one of the eminent German scientists specializing in archaeological geophysics in the past 40 years. An overview of his work in Bavaria as well as in the Near and Far East, Egypt, Eurasia and China, which was presented in the *Arbeitshefte des Bayerischen Landesamtes für Denkmalpflege* (BLfD - Bavarian State Department for Monuments and Sites) in 1999 and 2001, revealing the great range and diversity of his work on archaeological sites of the Old World.

His geophysics diploma and his doctoral thesis under the direction of Heiner Soffel at the Institute for General and Applied Geophysics of the Ludwig-Maximilians-University Munich, as well as his first scientific work from 1971–1973, dealt with paleomagnetism in Iran and the verification of seafloor spreading in Iceland. But since the very beginning of his career Helmut Becker also studied archaeology and was involved in a multitude of archaeological research projects in Turkey, Greece and Iraq, where he undertook topographical measurements, archaeomagnetic studies and, last but not least, in 1976, his first magnetometer surveys in Turkey and in Greece.

Within the frame of the Volkswagen Stiftung research project in 1977–1982, he came together with Irwing Scollar (Bonn), Emile Thellier, Albert Hesse, Alain Tabbagh (Garchy) and Martin Aitken (Oxford) to establish a new research field of Archaeo-Prospection and Archaeomagnetism at the Geophysical Observatory Fürstenfeldbruck and the Geophysical Institute in Munich. These successful and promising survey and research projects helped him to convince the director of the archaeological section of the Bavarian State Department for Monuments and Sites, Dr. Rainer Christlein, to establish the Archäologische Prospektion und Luftbildarchäologie section at the Bavarian State Department. This was the first time in Germany that a geophysicist was employed in an archaeological institute for archaeological geophysics. Helmut Becker directed this department from the start.

In 1982 Helmut Becker set up a cesium magnetometer system (Varian 101) with an automatic digital data recording system. Further development yielded in 1985 a wheel-deployed magnetometer prospecting system that allowed large areas to be measured in a comparatively short time. In the laboratory of the Bavarian State Department, Helmut Becker installed and developed a highly effective and powerful computer system for digital image processing of the geophysical data, rectification of oblique air photos and combined data interpretation. Together with aerial archaeologist Otto Braasch and from 1986 with Jörg Fassbinder, Helmut Becker accomplished very successful work at the Bavarian Department, not only with the discovery of previously unknown archaeological sites in Bavaria through aerial prospection and complementary magnetometer prospection, but also with a detailed and sophisticated interpretation and mapping of these sites. It was in his department that integrated prospection with a combination and data fusion of these complementary prospecting results and methods began.

Further development of the magnetometer system at the Bavarian State Department for Monuments and Sites (“From Nano- to Picotesla”) was stimulated by the discovery of the lower city of Troy and the Bronze Age fortification of Troy VI. The result was the most sensitive magnetometer system for archaeological prospection in the 1990s. Subsequently the cesium magnetometer system was enlarged to a duo- and quad-sensor system respectively. The handheld caesium duo-sensor system (Scintrex Smartmag SM4G-Special and Geometrics G-858G) is still among the most sensitive and effective prospecting systems with respect to large areas in difficult terrain; large-scale measurements in Qantir in 1996–2003 are a good example.

Helmut Becker’s idea for a geophysical prospecting section within an archaeological State Department was developed from the very beginning of his work. The objective was to survey different categories of archaeological monuments and to compare survey results for the development of further archaeological research questions. His idea to ascribe Neolithic ring ditch monuments to an archaeoastronomical context was one of the major results of such a prospecting approach.

Following this idea, we now have from Bavaria geophysical survey results and interpretation of all the known Neolithic ring ditch monuments from more than 15 large early Neolithic settlements, nearly 40 enclosures from the Hallstatt period, 35 Iron Age square enclosures, as well as survey results of nearly all accessible Roman *castella* in the Bavarian part of the limes, more than 30 Roman villas and about 15 early medieval castles, many of these sites previously completely unknown.

In 2005 Helmut Becker retired from the Bavarian State Department and started a new career with his private company “Becker Archaeological Prospection”. He is still active in geophysical prospection and walking hundreds of kilometres with a magnetometer, from Portugal and Spain in the west to Cornesti (Romania) in the east and places like Turkmenistan and Uzbekistan in the Far East.

Jörg W.E. Fassbinder