The nineteenth century with its heroic explorers is often regarded as the golden age of American cartography. Yet after people like Fremont and Powell had sketched the nation's basic topographic characteristics, the sweeping contours still had to be filled in. There were 3,000,000 square miles of country in the United States, but at the turn of the century their specific forest, soil, and geographic contents were very nearly blank. This paper adopts a broadly geographical perspective in explaining how a related family of applied field scientists advanced their own disciplines and careers by filling in those gaps. The family emerged just as Turner's frontier of western settlement dissolved. Now the order of the day became intensive settlement, a form of land use that required equally intensive knowledge of the land. Field scientists who worked in new bureaus (the Forest Service and the Soil Survey) and in new academic departments (geography and land economics) provided that knowledge by mapping the land with unprecedented precision and detail. In the first four decades of the twentieth century they pioneered a host of special-purpose maps, many of which remain familiar: forest and soil type maps, land valuation and recreation site maps, land-use maps and regional classifications. They did so by finding the “right places for the job.” Three regions, in particular, proved fruitful for their cartographic experiments: the upper Midwest and Great Lakes Cutover; the Boston-Washington urban corridor; and the Tennessee Valley. The surveying methods developed in these places traveled; they informed scientists, planners, and administrators all over the country. The geographical knowledge embodied in the new maps facilitated the on-going settlement and exploitation - the development - of American lands. Intensive mapping itself thus emerged as a land-use strategy for applied field scientists, one they found particularly appropriate for the historical geographical conditions of a developing, post-frontier nation.