Milner Library. The collection provides support for a variety of academic programs, including undergraduate majors in geography and geology and a specialized master's degree program in geohydrology. In addition the collection serves local and regional business users, as well as the research and travel interests of students and members of the community.

Milner's Map Collection is a very large paper collection, containing about 400,000 items. The collection was developed over a period of some 25 years by William W. (Bill) Easton, who was the first map librarian at Milner. Until his retirement in 1989, Bill was often a colorful figure at meetings of map librarians.

U.S. and Canadian topographic maps are the main strength of the collection. Topographic sheets are collected for every state, with the major emphasis being on Illinois and the Midwest. The Map Collection is also a depository for Canadian maps, and a sizable part of the collection is Canadian topographic sheets. Due to Bill Easton's interest in and travels to Australia, the collection also contains many Australian topographic maps.

Another area of strength is atlases. In addition to general world atlases, major atlases are held for many individual countries. Selected historical atlases are included as well as specialized local area and county atlases. A CD-ROM workstation with electronic atlases is also available. Plat books for each of the 102 counties in Illinois are held in a special area of the Map Collection. Paper copies of plat books are held from the late 1950's to the present. Earlier editions of county atlases and plat books are held on microfilm with county histories from the 1880's through the early 1900's.

The Map Collection also includes many aerial photos, primarily for counties in central Illinois. Most Illinois aerial photos date

from the 1940's, 50's and 60's, with later photos available for the local area. Aerial photos from some counties in Kentucky, Ohio and Pennsylvania are also available. State and city maps comprise another area of the Map Collection. Road maps are held for each state in the U.S. and the Canadian provinces. City maps are collected for most major cities in the U.S. and around the world; maps of smaller cities, primarily in Illinois, are also available.

Although located in Normal, the Map Collection at Illinois State University is far from normal in size or content. It is rather a unique and rich source of many different types of cartographic materials for students, faculty and the public at large.

UNIVERSITY OF ARIZONA LIBRARY

by Christine Kollen University of Arizona Library (520) 621-2597

There have been numerous changes at the University of Arizona Library the past three years. In October 1993, the Library officially moved to a new organizational structure which was the result of a 19 month review of its structure. This review was precipitated by several factors including continual state budget problems and serials inflation, implementation of the Library's integrated information system, changing information technology, and the recent arrival of Carla Stoffle, Dean of Libraries. One of the assumptions influencing the re-design was that the Library would be structured to allow greater flexibility in staffing. There were insufficient staff to work on the front lines and this was critical in the shift to a customer focus. As a result, several service points (both reference and circulation)

were combined in order to better serve the Library's customers. Reference service for cartographic materials is now provided at both the Main and Science-Engineering reference desks. All staff who work on these desks have been trained to provide basic reference service for cartographic materials. Indepth reference assistance is still handled by subject specialists.

About one year ago, the Map Collection and Media Center areas were remodelled. The entire area was opened up and a combined Maps, Media, and Reserve Book Room circulation desk and security gate were installed. The staff in this area, called Short Term Circulation, can assist customers in finding an item if they know the call number, title or author. If they need additional assistance, they need to go to either the Main or Science-Engineering reference desk. In addition, my office is still in the Map Collection and customers can stop by for consultation.

Last month we began our Geographic Information Systems (GIS) service. We have one computer in Main reference dedicated to GIS. This computer has ESRI's ArcView software loaded and provides access to the TIGER files and Census data. We've created several predesigned maps that show African-American, Hispanic, and Asian-American populations in Tucson and Arizona and also Education and Income for Tucson and Arizona. These pre-designed maps are available to anyone walking up to the computer. Each pre-designed map has an icon associated with it so a person can click on an icon and bring up a map for manipulation and printing. At the computer, we've provided basic information on GIS, ArcView, and our GIS service and instructions on how to manipulate and print the pre-designed maps. If customers are interested in a different geographic area or different social or economic data, then they need to make an

appointment with one of the Library's GIS specialists. Soon we will be providing access to spatial data sets in Arc/Info format that have been produced on campus in the College of Agriculture. These data sets will be accessed through the campus network and viewed at the GIS computer using ArcView. In addition, there will be another GIS computer installed in the Science-Engineering reference area that will have ArcView software loaded and provide access to science related spatial data.

reviews

BOOK REVIEW

How to Lie With Maps, 2nd ed. Mark Monmonier, University of Chicago Press, 1996, xiii and 207 pp., references, appendix, index. \$36.00 hardback (ISBN 0-226-53420-0); \$14.95 paper. (ISBN 0-226-53421-9)

Reviewed by Karen M. Trifonoff Department of Geography and Earth Science Bloomsburg University Bloomsburg, PA 17815

Spatial information abounds in today's world. We are bombarded with maps in all settings; in school, at work, at home and at play. Everything from political upheavals to weather phenomena such as hurricanes and tornadoes call for maps to explain, clarify and illustrate the event. Personal computers come with atlases as part of the software bundle and desktop mapping is commonplace in business and industry. Tourist centers have touch screen multimedia presentations with regional and local directional maps designed to guide the

viewer to the desired location. Yet, this information can easily be manipulated and twisted to fit the ends of the map maker at the expense of the map user.

The naiveté map reader, however, can be educated and entertained by reading Mark Monmonier's second edition of How to Lie With Maps, which familiarizes map users with the problems and pitfalls that can occur when creating or using a map. It is not a volume to instruct in cartographic methods, but rather one to raise the reader's awareness of the cartographic process. It is an engaging volume written in a casual style for the general public. The second edition has thirteen chapters including brief introductory and epilogue chapters, an appendix on latitude and longitude, a list of references and an index. One change from the first edition is an expanded chapter on color with a series of new color plates. Other additions include a forward by Harm DeBlij, a chapter on mapping bureaucracy focusing on the United States Geological Survey and a chapter on the use of maps in multimedia presentations.

The informal vet informational style of the brief introductory chapter sets the tone for the volume and elaborates on the central theme: that all maps must tell little white lies because they are scale models of a three-dimensional object on a two-dimensional surface. This challenges any preconceived ideas the map reader may have about the authenticity of most maps and encourages the reader to develop a new perspective on maps. The next two chapters on map elements and generalization bring the reader up to speed on many of the basic principles of cartography: map projections, symbolization, visual variables, generalization of point, line and area symbols and data classification.

The core of the volume, however, lies in the following five chapters dealing with mistakes that can occur on maps, both intentional and unintentional. Chapter Four, 'Blunders that Mislead', reinforces the idea that generalization and selection cause maps to tell lies. Therefore the caveat map user beware should preface many maps. Specific chapters on the use of maps in advertising, planning, politics and the military contain information on potential mapping problems that can arise in each area. These chapters will be of interest to specialists in each field and give historical perspective to the development of mapping. There are also suggestions for how one might influence local government officials through communicatively effective maps. For example, Chapter 6, 'Development Maps (or How to Seduce the Town Board)' provides an instance of how a property owner could use maps to demonstrate how a new planned tax assessment is too high.

Chapter 9, 'Large-Scale Mapping, Culture, and the National Interest', is new to the second edition. It introduces the reader to mapping in bureaucracies, specifically the United States Geological Survey. The Survey originated in 1879 as part of a project to map public lands west of the 100th meridian. This mapping survey was mainly performed by those trained in mapping at military academies, and thus the definitions of features included on the maps reflect this connection. For example, the author notes that including green tint on topographic maps was originally for military purposes. For instance, the definition of a woodland was defined as, "an area of normally dry land containing tree cover or brush that is potential tree cover...[that is] dense enough to provide cover for troops." Other issues addressed in this chapter include the problems associated with the development of standards and specifications for a map series (such as 7.5 minute quadrangles),