

#### **Micrographic Indexes**

The U.S. Geological Survey's (USGS) archives of aerial photographs of the United States consist of millions of frames from projects of many major Federal agencies. Flights have been made of various areas at different times using films with different emulsions and scales. Finding the right frame among all these photographs is a difficult task for any user of aerial photographs.

The Geological Survey has introduced a lowcost, easy-to-use system that enables the user to identify one frame among the millions available. The system, called Micrographic Indexes, is easily stored in a small box and does not require computer support—only a microfiche viewer.

All of the necessary information about date, emulsion (that is, black and white, color, or color infrared), and scale (ratio of distance on

the photograph to distance on the ground) is contained on microfiche that are about the size of a postcard. The information for one geographic area, such as Boston, Massachusetts, and its environs, can be shown on a few microfiche and the user is able to see the area covered by an aerial photograph before buying the photo.

The Micrographic Indexes contain photographs for Geological Survey mapping projects and the Survey's new National High-Altitude Photography Program (NHAP), high-altitude photographs taken by the National Aeronautics and Space Administration (NASA), and National Ocean Survey (NOS) photoindexes of the coastal and Great Lakes regions. National Mapping Program

# **Micrographic Indexes**



U.S. Department of the Interior Geological Survey National Cartographic Information Center (NCIC)



NOS low-altitude Micrographic Index



USGS mid-altitude Micrographic Index

### How the System Works

To locate photographs taken from altitudes of 40,000 feet and higher, a Micrographic Index user should begin by consulting the "Index to Topographic Maps of the United States at the Scale of 1:1,000,000" to determine the name of the desired geographic area. There are about 50 maps of the United States in this series. The maps are named for a principal feature on each map, often a city.

To begin locating photographs taken from altitudes of less than 40,000 feet, the user should consult the "Index to National Topographic Maps, 1:250,000-Scale Series." Both map indexes are available from the Geological Survey's National Cartographic Information Center, see address below.

Once the user has the correct name of the geographic area, he or she can pull out the microfiche containing aerial photographs for that area. If the area is in eastern Massachusetts, for example, the principal map name is

Boston. The principal map name, dates of coverage, emulsion, and the originator of the photographs are printed in eye-readable type at the top of each microfiche.

# U.S. Geological Survey Mapping Photographs

For the U.S. Geological Survey mid-range photographs (approximately 40,000 feet altitude) the reader will find images of 1:250,000scale maps printed in the upper half of the fiche. Outlines of the Survey's 7.5-minute topographic maps are superimposed over each map image, along with accession numbers. In the lower half of the indexes the user will find "shingle" mosaics (also known as "photoindexes") of the actual photographs. They are called "shingle" because they overlap like shingles, and they are mosaics because they form a pattern of photographs covering a large area.

By noting the reference number on the exposed side of each photograph in the "shingle" mosaics, the user can select the one frame or frames desired. The user can then order a print of that frame.

## **NASA High-Altitude Photographs**

For NASA high-altitude photographs (approximately 60,000 feet altitude) the user also will find images of 1:250,000-scale maps in the upper half of the fiche. Overlaid on the map image are outlines of the extent of coverage of each photograph listed in the Micrographic Index data base. NASA flew many of its projects in single strips, not over blocks of territory so these projects are termed "irregular." In the lower half of the fiche are shown computer printout pages with additional information such as date of photography, scale, and type of film emulsion.



USGS NHAP Micrographic Index



NASA high-altitude Micrographic Index

### National Ocean Survey Photographs

Micrographic Indexes for National Ocean Survey low-altitude coastal area photographs are similar in appearance to the NASA indexes except that the center points of each photograph are plotted rather than the extent of coverage.

# National High-Altitude Photography Program Photographs

National High-Altitude Photography Program Micrographic Indexes contain 1:250,000 maps with images of 7.5-minute topographic map areas superimposed on the images to show available photographs. The altitude for NHAP photos is approximately 40,000 feet.

## For Further Information

For further information on Micrographic Indexes, including costs, please send your name, address, and telephone number to:

National Cartographic Information Center U.S. Geological Survey 507 National Center Reston, Virginia 22092 Telephone: 703/860-6045

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U.S. Geological Survey EROS Data Center User Services Section Sioux Falls, South Dakota 57198 Telephone: 605/594-6151