

World Air Photo Coverage, 1960

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PREVIOUS publication on world air photo coverage has stressed availability.¹ We have seen that far more photography exists and is available, at least to citizens of a specific country photographed, than is generally assumed. However, the information about coverage has been changing rapidly due to: new photography, rephotography, military declassification and reclassification, greater accuracy of data, and, above all, increasing cooperation throughout the world on the provision of more complete facts. In addition, sufficient detailed data have been assembled so that a provisional table may be prepared to show more than the geographic characteristics of coverage. It is hoped that the presentation of these data will not only encourage the use of air photos but will provoke more completeness and publication of coverage data.

The procurement of information on air photo coverage is often difficult or time-consuming. Usually this is because of: sensitivity to military security, diplomatic problems, language barriers, beliefs that small-scale (e.g., 1/60,000) photography has utility only for photogrammetry, and lack of sufficient local office personnel to prepare coverage maps. Then, obtaining the photos themselves may be as difficult or more so for the same and additional reasons. Yet, understanding, patience, and real need for non-aggressive purposes have seldom gone unrewarded; further, much time may be saved if a potential user knows or suspects that photography has been taken of an area of proposed work.

Geographic characteristics of air photo coverage may be shown several ways. The distribution given on Figure 1 is based upon data in the public domain which makes certain or probable that air photos exist for an

area.² Further, these photos are available at least to citizens of the country photographed, if not to foreigners as well, through national offices in that country (e.g., geographical survey, mapping agency, geological survey, military organization). The known areas of photography are sub-divided into continuous and discontinuous coverage. The continuous classification means that at least one complete air view of a large area, generally a few hundred square miles minimum, is possible to obtain by the use of one or more sets of photography. Discontinuous coverage refers to incompleteness of photography where one or more unphotographed parts of an area may be tens of square miles in size. Of course, additional maps are necessary to distinguish between areas of coverage by: verticals and obliques, multiplicity of coverage, single-lens and multiple-lens, overlapping and single-picture photography, color and black-and-white, movie and still-camera type, wide-angle and narrow-angle pictures, as well as differences in scale, date, and quality of photos. In addition, satellite photography will require special handling.

Roughly two-thirds of the earth's land mass has been photographed from the air at least once (Figure 1). The more densely settled portions of each continent, excepting Asia, are known to have been covered. In North America there is continuous coverage of most of the continent and much is photography or rephotography taken since about 1950. South America is nearly two-thirds photographed but over half is discontinuous and much was taken in the early 1940's. Roughly eight-tenths of Europe west of the area of Soviet control is covered; the photos of large areas were taken during World War II but many relatively small and scattered areas have been photographed or rephotographed in the past decade. Photography for about half of Africa is in existence, mostly continuous but of various ages. Perhaps two-thirds of Australia and New Zealand has been flown,

(Continued on page 226)

¹ Stone, K. H., *World Air Photo Coverage, 1953*, PHOTOGRAMMETRIC ENGINEERING, Vol. XIX, No. 4, pp. 605-610, 1954.

———, *World Air Photo Coverage, The Professional Geographer*, Vol. XI (3), pp. 2-6, 1959.

———, Procurement of Aerial Photography (part), in *MANUAL OF PHOTOGRAPHIC INTERPRETATION*, American Society of Photogrammetry, Washington, D. C., pp. 19-26, 1960.

² Appreciation is expressed to Mr. C. G. Coleman, United States Navy Photographic Interpretation Center, for making possible the final drafting of Figure 1.

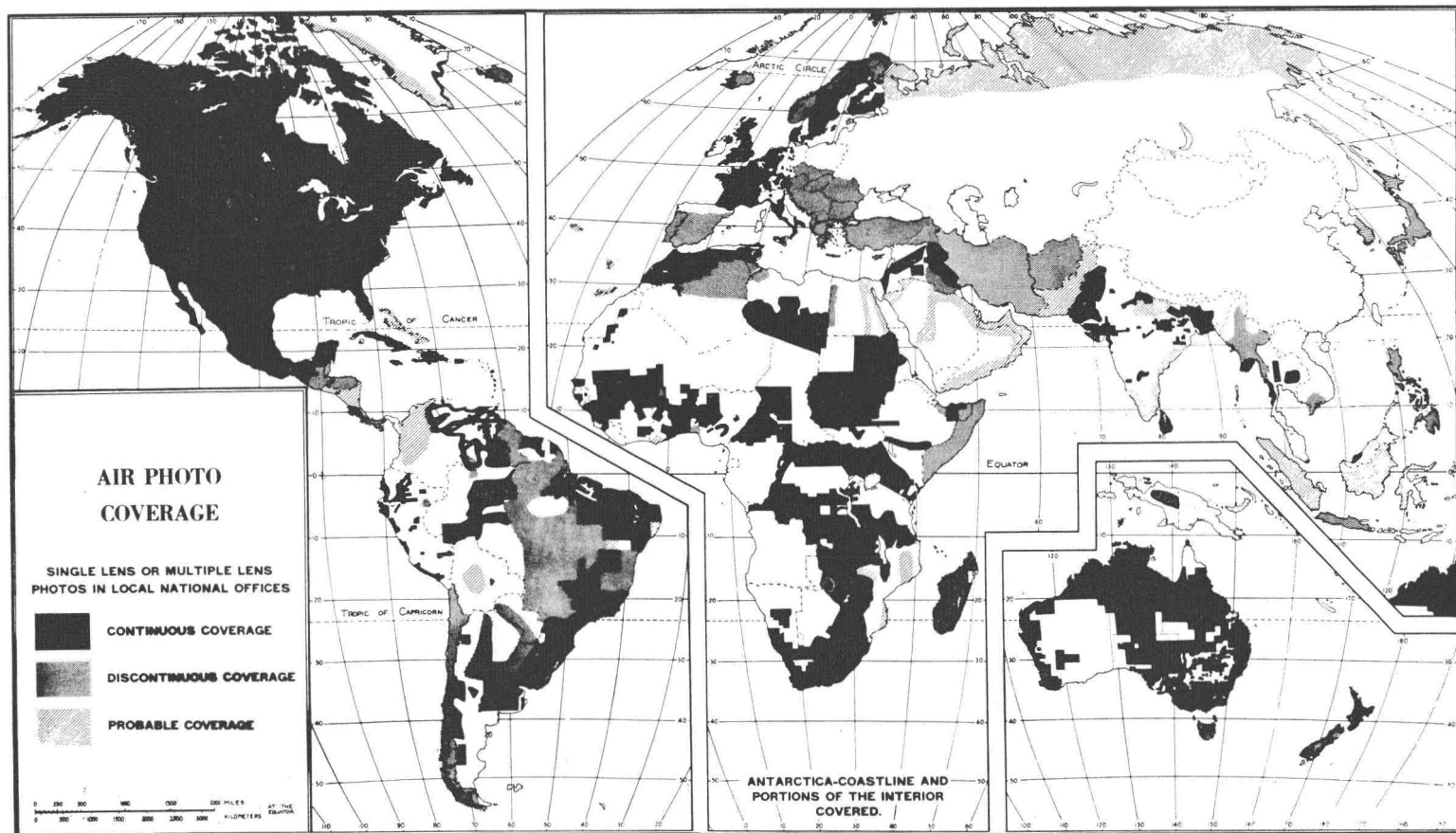


FIG. 1. World Air Photo coverage, 1960.

PHOTOGRAMMETRIC ENGINEERING

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART I

GENERAL							
CONTINENT AND COUNTRY	PROBABLE COMPLETENESS OF DATA	DATE OF LATEST DATA	SOURCE OF DATA	APPROX. PERCENT OF AREA COVERED	COVER-AGE MAPS AVAIL-ABLE	PHOTO TYPE	PHOTO SCALE
<u>AFRICA</u>							
Algeria	Incomplete	1950	Official	90		Single-Lens Vertical	1/50000-1/20000
Basutoland	Incomplete	1951	Official	100	Yes		
Bechuanaland	Incomplete	1951		20			
Belgian Congo	Incomplete	1957	Official	80	Yes		1/40000-1/10000
British Somaliland	Incomplete	1951	Unofficial	90		Single-Lens Vertical; Multiple Lens Trimetrogon	1/80000-1/40000
Ethiopia	Incomplete	1956	Unofficial	5		Single-Lens Oblique	
Federation of Rhodesia and Nyasaland	Incomplete	1959	Official	90		Single-Lens Vertical	1/40000-1/5000
French Cameroons	Incomplete	1950	Official	60	Yes	Single-Lens Vertical; Multiple Lens Trimetrogon	
French Equatorial Africa	Incomplete	1958	Official	40	yes	Single-Lens Vertical	1/50000
French West Africa	Incomplete	1958	Official	40	yes	Single-Lens Vertical	1/50000
Gambia	Incomplete	1951	Official	100			1/30000
Ghana	Incomplete	1951	Official	30			1/30000
Italian Somaliland	Incomplete	1952	Official	95		Single-Lens Vertical	
Kenya	Incomplete		Unofficial	40			
Libya	Incomplete	1959	Unofficial	50			
Morocco	Incomplete	1951	Official	90			
Mozambique	Incomplete	1954	Official	10			
Nigeria	Complete	1960	Official	30	Yes	Single-Lens Vertical; Multiple Lens Trimetrogon	1/30000

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART I (Continued)

SPECIFIC					
PHOTO YEAR	PHOTO SIZE	COST PER PHOTO	AVAIL- ABLE TO NON- NATION- ALS	SAMPLES AT U.W. M. & A.P. LIBRARY	MAIN HOLDING AGENCY
			Yes	Yes	
				No	Directorate of Colonial Surveys Tolworth, Surbiton, Surrey, England
				No	Directorate of Colonial Surveys Tolworth, Surbiton, Surrey, England
				No	Institute Geographique Leopoldville, Belg. Congo
				No	Air Ministry, Whitehall, London S.W.1, England
				No	Imperial Ethiopian Mapping and Geographical Institute, Addis Ababa, Ethiopia
1937-1959	9 x 9 in.		Yes	No	Dept. of Federal Surveys, P. O. Box 8181, Causeway, Salisbury, Southern Rhodesia
				No	
	19 x 22 cm. 19 x 19 cm.	185, 164 France	Possibly	Yes	Phototheque Nationale, Institut Geographique National, 136 Rue de Grenelle, Paris, France
	18 x 18 cm. 19 x 19 cm. 19 x 22 cm.	185, 164 France	Possibly	Yes	Phototheque Nationale, Institut Geographique National, 136 Rue de Grenelle, Paris, France
1946	10 x 10 in.	\$.21	Yes	No	Directorate of Colonial Surveys, Tolworth, Surbiton, Surrey, England
1946	10 x 10 in.	\$.21	Yes	No	Directorate of Colonial Surveys, Tolworth, Surbiton, Surrey, England
				No	
				No	
				Yes	Jack Ammann Photogr. Engrs., San Antonio 5, Texas; Fairchild Aerial Surveys, Inc., 9 Rockefeller Plaza, New York 20, New York
				No	
				No	Phototheque Nationale, Institut. Geographique National, 136 Rue de Grenelle, Paris, France
1942 - 1959	10 x 10 in.	3 sh. \$.21	Yes	No	Survey Division, Federal Survey Dept., Lagos, Nigeria

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART II

GENERAL							
CONTINENT AND COUNTRY	PROBABLE COMPLETENESS OF DATA	DATE OF LATEST DATA	SOURCE OF DATA	APPROX. PERCENT OF AREA COVERED	COVER-AGE MAPS AVAIL-ABLE	PHOTO TYPE	PHOTO SCALE
Portuguese Guinea	Incomplete	1953		20			
Sierra Leone	Incomplete	1951	Official	50			1/30000
Sudan	Incomplete	1959	Official	80	Yes	Single-Lens Vertical; Multiple Lens Trimetrogon	
Swaziland	Incomplete	1959	Official	100			
Tanganyika	Incomplete	1952	Unofficial	50			
Tunisia	Incomplete	1959	Official and Unofficial	80	yes		
Uganda	Incomplete	1957	Unofficial	90			1/40000-1/25000
Union of South Africa	Incomplete	1959	Official and Unofficial	90		Single-Lens	1/50000-1/7500
<u>ANGLO AMERICA</u>							
Canada	Complete	1958	Official	99	yes	Single and Multiple Lens Vertical & Oblique	1/60000-1/8000
Greenland	Incomplete	1957	Unofficial			High Oblique, Trimetrogon	1/40000
United States	Complete	1958	Official	99	Yes	Single and Multiple Lens Vertical & Oblique	1/66000-1/10000
<u>ANTARCTICA</u>	Incomplete	1951	Official		No	Single-Lens Vertical & Oblique; Trimetrogon	Various
<u>ASIA</u>							
Afghanistan	Incomplete	1957	Unofficial	80			
Burma	Incomplete	1960	Unofficial	90		Single-Lens Vertical	1/60000-1/6000
Cambodia	Incomplete	1960	Unofficial	100		Single-Lens Vertical	1/40000-1/5000
China	Incomplete	1954	Unofficial	50			
India	Incomplete	1956	Official	20			1/43000-1/5000

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART II (Continued)

S P E C I F I C					
PHOTO YEAR	PHOTO SIZE	COST PER PHOTO	AVAIL- ABLE TO NON- NATION- ALS	SAMPLES AT U.W. M. & A.P. LIBRARY	MAIN HOLDING AGENCY
				No	
1946	10 x 10 in.	\$.21	Yes	No	Directorate of Colonial Surveys, Tolworth, Surbiton, Surrey, England
Since 1942				No	Sudan Survey Dept., Ministry of Mineral Resources, P. O. Box 306, Khartoum
				No	
				No	Directorate of Colonial Surveys, Tolworth, Surbiton, Surrey, England
			Yes	No	
			Yes	No	Director of Surveys, P. O. Box 1 Entebbe, Uganda
Pre-1940-1959	7 x 7 in. 9 x 9 in.		Yes	No	Trigonometrical Survey Office, P. O. Box 624, Pretoria, Union of South Africa
1930 - 1959	9 x 9 in.	\$.50	Yes	Yes	National Air Photographic Library, Dept. of Mines and Technical Surveys, Ottawa, Canada and Provincial centers.
	9 x 9 in.		No	No	Geodetisk Institute Copenhagen, Denmark
1936 - 1959	7 x 9 in. 9 x 9 in.	\$.55 \$.70	Yes	Yes	U.S. Dept. of Agriculture, Washington 25, D.C. U.S. Dept. of the Interior, Wash. 25, D. C.
1928 - 1948	9 x 9 in.		Yes	No	Office of Public Information, Exec. Office of the Secretary, U. S. Navy Dept., Washington 25, D. C.
				No	
1923 - 1954				Yes	Survey Dept. of Burma, Rangoon, Burma
1952 to date	9 x 9 in. 13 x 18 cm.			Yes	
1941 - 1945			No	No	
		\$1.00	Yes	Yes	Geodetic and Research Branch, Survey of India, Dehra Dun, India

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART III

GENERAL							
CONTINENT AND COUNTRY	PROBABLE COMPLETENESS OF DATA	DATE OF LATEST DATA	SOURCE OF DATA	APPROX. PERCENT OF AREA COVERED	COVER-AGE MAPS AVAIL-ABLE	PHOTO TYPE	PHOTO SCALE
Iran	Incomplete	1959	Unofficial	90		Single-Lens Vertical; Five-Lens Oblique	
Iraq	Incomplete	1960	Unofficial	65	Yes	Single-Lens Vertical	
Japan	Incomplete	1951	Official	100	No	Multiple-Lens Trimetrogon; Single-Lens Vertical	1/69000-1/7000
Laos	Incomplete	1960	Unofficial			Single-Lens Vertical	1/40000-1/5000
Pakistan	Incomplete	1956	Official	95			
Philippines	Incomplete	1950	Unofficial	20		Single-Lens Vertical; Trimetrogon	1/40000-1/8000
Saravak	Incomplete	1942	Unofficial	10			
Saudi Arabia	Incomplete	1951	Unofficial	30	No	Multiple-Lens Trimetrogon	1/40000
Syria	Incomplete	1936	Unofficial	40			
Thailand	Incomplete	1960	Unofficial	20		Single-Lens Vertical	1/48000-1/10000
Turkey	Incomplete	1950	Unofficial	90			
U.S.S.R.	Incomplete	1959	Unofficial	10			
Viet Nam	Incomplete	1960	Unofficial	100		Single-Lens Vertical	1/40000-1/5000
<u>AUSTRALIA - OCEANIA</u>							
Australia	Complete	1952	Official	70	No	Single-Lens Vertical; Multiple Lens Trimetrogon	1/50000-1/2000
Central Pacific Islands	Incomplete	1959	Official	80	No	Single-Lens Vertical & Oblique	1/47000-1/2500
New Zealand	Incomplete	1958	Unofficial and Official	90	Yes	Single-Lens Vertical	1/30000-1/5000
Samoa	Incomplete	1958	Unofficial	100			
Tasmania	Incomplete	1959	Unofficial	100	No	Single-Lens Vertical	1/15000

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART III (Continued)

S P E C I F I C					
PHOTO YEAR	PHOTO SIZE	COST PER PHOTO	AVAIL- ABLE TO NON- NATION- ALS	SAMPLES AT U.W. M. & A.F. LIBRARY	MAIN HOLDING AGENCY
1941 - 1945				No	
				No	
1944 - 1948	9 x 9 in.		No	Yes	Photographic Records and Services Division, U. S. Air Force, Washington 25, D. C.
1941 to date	9 x 9 in. 13 x 18 cm.			Yes	
				Yes	Survey of Pakistan, Muree, Pakistan
				Yes	
				No	
1941 - 1945				Yes	
				No	
1953 to date	9 x 9 in.			Yes	Dept. of Aerial Mapping Organization, Bangkok, Thailand
			No	No	
				No	
1941 to date	9 x 9 in. 13 x 18 cm.			Yes	
1929 - 1945	9 x 9 in.		Yes	Yes	
Since 1941	9 x 9 in.		Yes	Yes	Technical Consultants Office, Pacific Missile Range, U.S. Naval Missile Center, Point Mugu, California
1937 - 1945	9 x 6 in.		Yes	No	Aerial Survey Branch, Lands and Survey Dept., Wellington, New Zealand
				No	
	9 x 6 in.		Yes	Yes	

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART IV

GENERAL							
CONTINENT AND COUNTRY	PROBABLE COMPLETENESS OF DATA	DATE OF LATEST DATA	SOURCE OF DATA	APPROX. PERCENT OF AREA COVERED	COVER-AGE MAFS AVAIL-ABLE	PHOTO TYPE	PHOTO SCALE
<u>EUROPE</u>							
Belgium	Incomplete	1956	Official	95	No	Single-Lens Vertical	1/40000-1/10000
Bulgaria	Incomplete	1946	Official		No	Single-Lens Vertical	Rocket Photos
Cyprus	Incomplete	1945	Unofficial				1/10000
Denmark	Complete	1958	Official	95	No	Single-Lens Vertical	1/40000-1/10000
Eire	Incomplete	1956	Unofficial	20			
Finland	Complete	1959	Official and Unofficial	70	No	Single-Lens Vertical & Oblique	1/40000-1/10000
France	Complete	1956	Official	95	Yes	Single-Lens Vertical & Oblique	1/30000-1/5000
Iceland	Incomplete	1958	Official	95	No	Single-Lens Vertical	1/43000-1/15000
Italy	Incomplete	1955	Unofficial	40		Single-Lens Vertical	1/45000-1/8000
Netherlands	Incomplete	1956	Official	95	No		1/20000
Northern Ireland	Incomplete	1956	Unofficial	100	No	Single-Lens Vertical & Oblique	
Norway	Complete	1959	Official	60	Yes	Single-Lens Vertical & Oblique	1/50000-1/8000
Spain	Incomplete	1950	Unofficial				1/20000-1/18000
Spitzbergen	Incomplete	1939	Unofficial	100		Single-Lens Vertical	
Sweden	Incomplete	1960	Unofficial	90	Yes	Single-Lens Vertical	1/65000-1/2500
Switzerland	Incomplete	1956	Unofficial	50	No	Single-Lens Vertical	1/50000-1/7000
United Kingdom	Incomplete	1959	Unofficial	100	No	Single-Lens Vertical & Oblique	1/20000-1/5000
U.S.S.R.	Incomplete	1957	Unofficial			Single-Lens Vertical	1/60000-1/15000

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART IV (Continued)

S P E C I F I C					
PHOTO YEAR	PHOTO SIZE	COST PER PHOTO	AVAIL- ABLE TO NON- NATION- ALS	SAMPLES AT U.W. M.& A.P. LIBRARY	MAIN HOLDING AGENCY
			No	Yes	Military Geographical Institute, 2 Allee du Cloitre, Brussels, Belgium.
1945	6 x 7 in.			Yes	
1943				No	
1945 - 1950	9 x 9 in.	6 Kr.	No	No	Geodetic Institute, Copenhagen, Denmark
				No	
1936 - 1956	18 x 18 cms.	250 Marks	Possibly	Yes	General Survey Office, Kirkonkatu 3, Helsinki, Finland
1946 - 1950	13 x 18 cms. 18 x 24 cms. 24 x 24 cms.	40,48 & 54 France	Yes	Yes	Institut Geographique National, Service de La Photogrammetrie, 2 Ave. Pasteur, Sant - Mande, Paris
1945 - 1957		15.00- 18.50 Kr.		No	Icelandic Surveying Institute, Reykjavik, Iceland
Since 1925	7 x 7 in.			Yes	Instituto Geografico Militaire, Florence, Italy
1934 - 1950				Yes	Topographische Dienst, Westvest 9 Delft, Netherlands
				No	
Pre 1956-1959	18 x 18 cm. 30 x 40 cm.	5-7 Kr.	Yes	Yes	Widere Flyveselskap A/S, Kr. August Gt., Oslo, Norway
Since 1941	7 x 7 in.			Yes	
1936 - 1938				No	
1940 - 1959	6 x 6 cm. 18 x 18 cm.	8-20 Kr.	Possibly	Yes	Rikets Allmänna Kartverk, Hantverkagatan, Stockholm, Sweden
1951	9 x 9 in.			Yes	
1945 - 1956	8 1/2 x 6 1/2 in.	5 Sh.	Yes	Yes	Air Ministry, Whitehall, London S.W. 1, England
	9 x 9 in.			Yes	

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART V

G E N E R A L							
CONTINENT AND COUNTRY	PROBABLE COMPLETENESS OF DATA	DATE OF LATEST DATA	SOURCE OF DATA	APPROX. PERCENT OF AREA COVERED	COVER-AGE MAPS AVAIL-ABLE	PHOTO TYPE	PHOTO SCALE
West Germany	Incomplete	1953	Unofficial	40			
Yugoslavia	Incomplete	1955	Unofficial				1/30000-1/10000
<u>L A T I N A M E R I C A</u>							
Argentina	Incomplete	1954	Unofficial	50		Multiple-Lens Trimetrogon	
Bolivia	Incomplete	1959	Unofficial	10		Single-Lens Vertical	1/20000
Brazil	Incomplete	1950	Unofficial	70	Yes	Single-Lens Vertical; Multiple Lens Trimetrogon	1/40000-1/20000
British Guiana	Incomplete	1959	Unofficial	50			
British Honduras	Incomplete	1947	Unofficial	50			1/40000
Chile	Incomplete	1959	Unofficial	80		Multiple-Lens Trimetrogon; Single-Lens Vertical	
Colombia	Incomplete	1959	Unofficial	10		Multiple-Lens Trimetrogon; Single-Lens Vertical	
Costa Rica	Incomplete	1955	Official	80	No	Single-Lens Vertical; Multiple Lens Trimetrogon	1/40000
Cuba	Incomplete	1959	Official	100		Single-Lens Vertical	
Dominican Republic	Incomplete	1959	Official	35		Single-Lens Vertical	
Ecuador	Incomplete	1959	Official	20		Single-Lens Vertical	
French Guiana	Incomplete	1956	Unofficial	30			
Guatemala	Incomplete	1952	Unofficial	50			
Haiti	Incomplete	1959	Official	100		Single-Lens Vertical	
Honduras	Incomplete	1952	Unofficial	50			
Jamaica	Incomplete	1956	Unofficial	100	No	Single-Lens Vertical	

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART V (Continued)

PHOTO YEAR	S P E C I F I C		AVAIL- ABLE TO NON- NATION- ALS	SAMPLES AT U.W. M. & A.P. LIBRARY	MAIN HOLDING AGENCY
	PHOTO SIZE	COST PER PHOTO			
1946 - 1958	9 x 9 in.			Yes	Institute for Ange. Geodäsie, Frankfurt, Germany
1949 - 1955	14 x 14 cms. 13 x 18 cms.			Yes	Federal Institute of Photogrammetry, Belgrade, Yugoslavia
1945				No	
				No	
1943 - 1945	9 x 9 in.		Yes	No	Conselho Nacional de Geografia, Rio de Janeiro, Brazil
				No	
				No	
1945				No	
1943				No	
1947	9 x 9 in.	\$.70	Yes	No	Photographic Records and Services Division, U.S.A.F. Aeronautical Chart and Information Center, Washington 25, D. C.
				No	
				No	
				No	
				No	
				No	
				No	
				No	
Pre 1947			Yes	No	Directorate of Colonial Surveys, Teddington, Middlesex, England

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART VI

GENERAL							
CONTINENT AND COUNTRY	PROBABLE COMPLETENESS OF DATA	DATE OF LATEST DATA	SOURCE OF DATA	APPROX. PERCENT OF AREA COVERED	COVER-AGE MAPS AVAIL-ABLE	PHOTO TYPE	PHOTO SCALE
Mexico	Incomplete	1959	Unofficial	100	No	Single-Lens Vertical; Multiple-Lens Trimetrogon	1/40000-1/5000
Panama	Incomplete	1959	Official	60		Single-Lens Vertical	
Paraguay	Incomplete	1959	Unofficial	20			
Peru	Incomplete	1959	Unofficial	20		Single-Lens Vertical	
Surinam	Incomplete	1952	Unofficial	60			1/40000
Trinidad	Incomplete	1947	Unofficial	100			1/40000
Venezuela	Incomplete	1959	Official	70	No	Single-Lens Vertical; Multiple-Lens Trimetrogon	1/58000-1/20000

nearly all of the cover being continuous, but only a small percentage is known to have been taken since about 1950. For eastern Europe and Asia data are fragmentary and rapidly changing because of military restrictions; nevertheless, coverage information available through normal non-military research channels for all parts of that area are included to encourage use by local citizens.

The absence of symbols in any area on Figure 1 should be interpreted as inadequate information rather than meaning no coverage is available. Information is especially needed for: the island groups of the world, the western countries of South America, northwest and southwest Africa, the U.S.S.R., and southwest and southeast Asia. Only unrestricted data of a non-military nature are desired.

All general and specific information on world air photo-coverage, available to the general public, have been tabulated (Table 1). Data are arranged alphabetically by continents and countries. The material has been collected from many multilingual sources during the past 20 years and was arranged in tabular form by James R. Gibson; all aid in the supply of the data is acknowledged with gratitude.

Under the general headings it will be noted that most data are incomplete, too many are dated in the early 1950's, the sources are largely official, and that the estimated per-

centage of area covered varies greatly. It is most encouraging, however, to note so many countries for which coverage maps are available as well as the increasing trend toward the publication of these references; several of the maps include listings of specific marginal data on the air photo coverage shown. The numerous gaps in Table 1 illustrate that too little is known and assembled about specific characteristics of world air photo coverage. It is here where so much work remains to be done.

In general, any coverage shown on Figure 1 is available for study and/or purchase by a citizen of the country photographed. Further, many nations permit foreigners to study or purchase some or all photography needed for research; requests must be quite specific as to area, and military intelligence agency clearance often is necessary, but these requirements usually are reasonable. The existence of samples of coverage in the University of Wisconsin Map and Air Photo Library is noted to help prospective users judge photographic quality. The Library is a unit of the Department of Geography and houses a selected research collection of about 55,000 air photos and 85,000 maps. Photos may be examined at the library and in special cases loans may be arranged. Otherwise, data on photographic characteristics generally are obtainable from the main holding agency, listed on Table 1, or from a national mapping

TABLE 1. WORLD AIR PHOTO COVERAGE DATA—PART VI (Continued)

S P E C I F I C					
PHOTO YEAR	PHOTO SIZE	COST PER PHOTO	AVAIL-ABLE TO NON-NATION-ALS	SAMPLES AT U.W. M. & A.P. LIBRARY	MAIN HOLDING AGENCY
1940	9 x 9 in.		Yes	Yes	Servicio Geografico del Ejercito or Cia. Mexicana Aerofoto, Mexico City, D.F.; Photographic Records & Services Div., U.S.A.F. Aeronautical Chart & Information Center, Wash.D.C.
				No	
				No	
				No	Servicio Aerofotografico Nacional, Lima, Peru
				No	C.B.A.S., Paramaribo, Surinam
1938				No	
	9 x 9 in.			Yes	Ministerio de Obras Publicas, Caracas, Venezuela

office in the country concerned.

Much remains to be done in the assembly of information about world air photo coverage. It must be recognized that any tendency to conceal data about air photos should be modified. Much old coverage is valuable for current research and historical characteristics and has lost its military significance. Further, many detailed maps and documentary source

materials already available negate a large part of the possible military use of air photos. To deny availability of data on air photos, or of the photography itself, is to stifle research. To supply such information is to guarantee the increased use of air photos for interpretation, photogrammetry, and in field mapping and, thereby, to improve research techniques and results.

*Photographic Image Identification Errors and Their Effect on Determination of Tilt and Resection**

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(Abstract is on following page)

THIS paper is a report of an investigation

- 1) to determine the magnitude of discrepancies resulting from image misidentification during measurement of photographic coordinates;
- 2) to ascertain the effects of these dis-

crepancies on orientation and resection computations using a modified form of the Church "Post-card" Method; and

- 3) to determine whether the results of the computations involving coordi-

* Portions of a thesis submitted in partial fulfillment of the requirements for the Master of Science Degree at the State Univ., College of Forestry at Syracuse Univ.