TABLE OF CONTENTS

The Leica Camera Comes of Age	7
PART I—BASIC LEICA CAMERA TECHNIQUE	
CHAPTER 1. Leica Camera and Its Auxiliary Equipment . 1 by Willard D. Morgan	5
What to Photograph with a Leica. Know Your Leica. Your Beginning. How to Make Your First Leica Pictures. Loading the Leica Film Magazine. Models III, IIIb and IIIc Leicas. Interior Mechanism of the Leica. Daylight Loading. Winding the Film. Earlier Leica Models. Leica Accessories. Vidom Universal View Finder. Image Erecting Universal View Finder. Direct View Finder. Wide-Angle View Finder. Wintu Angle Finder. Sunshades and Their Use. Correction Lenses for Range and View Finders. Slow Timing Device. Rapid Winder. Leica-Motor Protective Cases. Optical Short Distance Focusing Device "Nooky." Panorama Photography. Remote Release and Shutter Winder. Single Exposure Leica.	
CHAPTER 2. My Leica Camera Technique	15
Selecting Film and Developer. Filtering Solutions. Washing the Film. Selecting Lenses and Their Various Uses. Filters. Enlarging Leica Photographs. How to Look at Enlargements. Exposure and Development. Eliminating Dust. Making Lantern Slides. Making Lantern Slides by Enlarging. Black and White Enlargements from Kodachrome Positives.	
CHAPTER 3. Leica Camera Lenses	1
The Iris Diaphragm. The Miniature vs. Larger Cameras. Depth of Field and Relative Aperture. Depth of Field Scale. Exposure Variations. Perspective and the Various Leica Lenses. The Hektor 28mm f:6.3. The Elmar 35mm f:3.5. The 50mm Lenses. The Hektor 73mm f:1.9. The Elmar 90mm f:4. The Leica 90mm f:4.5. The Thambar 90mm f:2.2. The Elmar 105mm f:6.3. The Leica 127mm f:4.5 The Hektor 135mm f:4.5. The Telyt 200mm f:4.5. The Telyt 400mm f:4.5. Mirror Reflex Housing. Front Lenses. Proper Care of Lenses.	
	5
by Henry M. Lester	
When Filters Should be Used. Color Sensitivity Charts. Color Balance and Correction of Contrast. Making Your Own Filter Tests. Filter Factors. Choice of Film and Filter. What Filters to Use. Filter Factor Table. Polarized Light. Pola Screens. In Color Photography. Dark Sky Effects.	

CHAPTER 5. The 35mm Film — Its Selection, Exposure	
and Development	119
by Henry M. Lester	
Part I — Film Selection	
Sensitivity to Color. Speed of Emulsion. Graininess. Contrast. Latitude. Selection to Fit the Purpose. Types of Film. Panchromatic Emulsions. Orthochromatic. Color-Blind and Special Emulsions. Infrared and Reversible Films. Emulsion Speed Values. Comparative Table of Speed Ratings. When to Use a Certain Film. Films for the Leica.	
Part II — Film Exposure	
Exposure Meters. How to Use an Exposure Meter. How to Make Exposures Without an Exposure Meter. Exposures for Photoflash.	
Part III — Film Development	
Development with Relation to Exposure. Developing Equipment. Developers. Preparing Your Own Developer. Developing Formulas. Time and Temperature Control of Fine Grain Developers. Compromise Developers. Re-using Developers. Agitation. Stop Bath and Fixing Bath. Washing the Film. Drying the Film. Soaking a Film Before Development. Steps in Developing a Film. General Suggestions. Reticulation. Newton Rings. Film Cleaner. Reducing and Intensifying Leica Negatives. Formulas and Procedure for Reversible Film. Storage and Preservation of Films.	
CHAPTER 6. Synchronized Flash Photography by George W. Hesse	161
The Leica Synchronizer. Selective Synchronization. Leica Flash Accessories. Using the Electronic Speed Lamp. How to Use Flash Lamps. Sun and Flash Photography. Determining Synchronized Flash Exposures. Flash Numbers.	
CHAPTER 7. Your Own Darkroom	169
The Darkroomette. A Model Darkroom. Bathtub Finishers. Stocking the Laboratory. A Two-Room Laboratory.	
CHAPTER 8. Enlarging and Contact Printing by Willard D. Morgan	177
Selecting the Equipment. Valoy Enlarger. Focomat Enlarger. Accessories. Vasex Enlarger. Making the Actual Enlargements. Estimating Print Density. Printing Control During Enlarging. Photoflood Bulbs. Contact Printing.	
CHAPTER 9. Enlarging Papers and Printing	195
Choice of Paper Stocks and Surfaces. Tone Gradation. Fast and Slow Projection Papers. Contact Papers. Development. Exposure. Exposure Factors at Various Magnifications. Comparative Speed of Various Projection Papers. Stop Bath. Fixing. Washing. Hypo Test. Drying. Ferrotyping. Toning. Spotting. Presentation of the Finished Prints. Embossing Prints.	

CHAPTER 10. Copying and Close-up Photography	221
by Willard D. Morgan — Data Tables by Henry M. Lester	
Importance of Small Object Photography. Accessories. Sliding Focusing Copy Attachment. Extension Tubes. Data Table for Extentension Tubes Used Directly on the Leica. Tables for Extension Tubes and Formulas. Focusing. Avoiding Vibration During Copying. Critical Focusing with 30x Magnifying Glass. Focusing by Measurement. Fixed Focusing. Illumination. Making and Using Film Copies. Exposure Time. Films Used. Developing. Filters. Lighting Medical Specimens. Auxiliary Reproduction Devices. Rotating Copy Attachment. 250 Exposure Leica.	
CHAPTER 11. Making Positives for Projection by Willard D. Morgan	255
What Makes Good Positives. The Two Positive Printing Processes. Contact Printers. Eldia Printer Directions. Making the Leica Glass Positive. Projection Paper for Testing. Mounting the Finished Glass Slide. Film and Glass Slides by Projection. Combination Printer Directions. Belun 1:1 Copy Attachment.	
CHAPTER 12. Projecting Your Pictures by Willard D. Morgan	271
Equipment Available for Projection. Table of Screen Distances and Areas. Titles for Films. Storage.	
CHAPTER 13. Stereoscopic Photography	281
The Stereo Equipment. Filters. Sunshades and Film. Stereo Color Pictures. Protecting the Stereos. Making of Stereo Prints. Stereo Projection.	
CHAPTER 14. Natural Color Photography with Koda- chrome Film	291
by Henry M. Lester	
Additive and Subtractive Principle. Daylight or Artificial Light. Type A Film. Exposures in Artificial Light. Table for Photoflash Lamps. Medical Photography. Color Film Latitudes. Daylight Exposures. Filters. Daylight Kodachrome Exposure Guide. Projection. Black and White Pictures from Kodachrome Film.	
CHAPTER 15. Ansco Color Film and Ansco Printon	303
by John S. Carroll	
Ansco Color Film, Types. Filters. Daylight Exposure Guide. Photo-flash Exposure Table. Indoor Exposures. Processing Ansco Color Film. Formulas. Ansco Printon. Filters. Processing Ansco Printon Formulas.	

PART II—LEICA CAMERA IN SCIENCE AND EDUCATION

Education Through the Eye	319
by Looking. Sources. Importance of a Shooting Script. tion. Flat Prints and Projection of Pictures. Uses of Visual A Project in Visual Education. Narration by Instructor ronized Record. Cost of Synchronized Recording. A Prac-System.	
The Leica Camera in Historical Research	339
es, Ph.D.	
g Complete Historical Record Pictures. The Research nt. Economical and Time Saving.	
Archeology and Exploration	345
bed	
Field Work. Aerial Photographs. Archeology. Natural and Exploration for the Amateur. Indirection Photography. f Equipment and Its Care.	
The Miniature Camera for Miniature	
Monsters	365
the Insects. Equipment. Photographing in the Field. the Correct Photographing Angle. Bringing Home the Jounting the Insects. Lighting. Ultraviolet Light. Equipmoor Work. Photographing at Home. Exposure and ment.	
Photomicrography with the Laine Commen	000
Photomicrography with the Leica Camera .	389
Use the Leica for Photomicrography. How to Adapt the the Microscope. Photomicrography of Living Matter with to Ibso Attachment. General Photomicrography with the Focus Attachment. Obtaining Critical Focus. Amateur crography. Selecting the Microscope. Illumination Appagagnification and Resolving Power. Light Sources. Filters is. Exposure.	
Dental Photography	415
unn, D.D.S.	110
ont Required. Making the Photographs. Focusing. Trans- tion of Teeth. Illumination. Photographing Reflected Determining Exposures. Reproduction of Pictures from on Screen. Importance of Keeping Accurate Records.	
The Leica as an Ophthalmic Camera	431
	401
nipment for Ophthalmic Photography. Mirror Reflex Hous- osure Factors. Illuminating the Eye. Flashlight Exposures. Iters. Natural Color Photography. Kodachrome and Ansco Making of Black-and-White Negatives from Color Film. crography in Ophthalmology. Special Illumination. Infra- tography. Placido Disc Reflections. Portraits of Patients. Box Photography.	
	by Looking. Sources. Importance of a Shooting Script. ion. Flat Prints and Projection of Pictures. Uses of Visual A Project in Visual Education. Narration by Instructor ronized Record. Cost of Synchronized Recording. A Prac- System. The Leica Camera in Historical Research is, Ph.D. g Complete Historical Record Pictures. The Research int. Economical and Time Saving. Archeology and Exploration Archeology and Exploration Archeology and Exploration Archeology and Exploration Equipment and Its Care. The Miniature Camera for Miniature Monsters The Miniature Camera for Miniature Monsters The Insects. Equipment. Photographing in the Field. the Correct Photographing Angle. Bringing Home the founting the Insects. Lighting. Ultraviolet Light. Equip- Indoor Work. Photographing at Home. Exposure and ment. Photomicrography with the Leica Camera Use the Leica for Photomicrography. How to Adapt the the Microscope. Photomicrography of Living Matter with to Ibso Attachment. General Photomicrography with the Focus Attachment. General Photomicrography with the Focus Attachment. General Photomicrography with the Focus Attachment. Obtaining Critical Focus. Amateur rography. Selecting the Microscope. Illumination Appa- agnification and Resolving Power. Light Sources. Filters s. Exposure. Dental Photography unn. D.D.S. Int Required. Making the Photographs. Focusing. Trans- ion of Teeth. Illumination. Photographing Reflected Determining Exposures. Reproduction of Pictures from m Screen. Importance of Keeping Accurate Records. The Leica as an Ophthalmic Camera The Leica as an Ophthalmic Camera The Leica as an Ophthalmic Camera The Leica as an Ophthalmic Photography. Mirror Reflex Hous- source Factors. Illuminating the Eye. Flashlight Exposures. Therefore and Anscore faking of Black-and-White Negatives from Color Film. The Corporaby Placido Disc Reflections. Portraits of Patients. The Leica as an Ophthalmology. Special Illumination. Of Patients.

CHAPTER 23. Infrared Photography	453
Infrared Films. Differences in Infrared Values. Infrared Photography in the Field of Medical Research. Criminology. Photomicrography. Exposures and Filters.	
PART III—THE LEICA CAMERA IN SPECIALIZED FIELDS	
CHAPTER 24. Candid, Stage and News Photography. by J. Winton Lemen	463
The Sequence Picture. My News Photo Technique. Weddings and Churches. Covering Conventions. Artificial Illumination. Films and Exposures. Film Development. Speed Gained by Enlarging Wet Films. Film Development Enroute. The Miniature Camera in the Courtroom. Where to Find Picture Subjects. Stage and Action Photography. Equipment Recommended. Standardizing Your Methods.	
CHAPTER 25. Aerial Photography	485
Aerial Compared to Ground Photography. Leica as a Profitable Aerial Camera. Starting Your Own Aerial Photo Business. Controlling Perspective by Lens Selection. Making the Preliminary Ground Survey. Filters for Different Visibilities. Exposure. Infrared Photography. Films. Preventing Vibration During Exposure. Photographing from Transport Air Liners. Your Personal Airplane. Aerial Photos at Low Altitudes.	
CHAPTER 26. Exploring with the Leica Camera by Julien Bryan	509
Keeping a Clear Photographic Viewpoint. Patience and Good Manners Essential. Sense of Humor and Understanding Helps. Preparing for the Expedition. Elimination of Unessential Equipment. Selecting Film. Obtaining Correct Exposure. What Filters to Use. New Viewpoints. Photographic Restrictions and Censorship.	
CHAPTER 27. Leica Camera in the Tropics	527
by John W. Vandercook Equipment. A Dehydrating Method. Developing the Film.	
INDEX	532