## CONTENTS

PART ONE	: THE MICROSCOPE	
Chapter 1.	Principles of Microscopy	3
Chapter 2.	The use of the Microscope	31
Chapter 3.	Photomicrography	55
PART TOW : THE PREPARATION OF MICROSCOPE SLIDES		
Chapter 4.	Types of Microscope Slides	77
Chapter 5.	Materials and Equipment	80
Chapter 6.	Fixation and Fixatives	85
Chapter 7.	Stains and Staining	97
Chapter 8.	Dehydrating and Clearing	118
Chapter 9.	Mounts and Mountants	124
Chapter 10.	Making Wholemounts	128
Chapter 11.	Making Smears and Squashes	140
Chapter 12.	Making Sections	145
Chapter 13.	Cleaning, Labeling, and Storing Slides	191
PART THR	EE : SPECIFIC EXAMPLES OF SLIDE MAKING	
Example 1.	Preparation of a Wholemount of a Mite by the Method of Berlese	197
Example 2.	Preparation of a Wholemount of Pectinatella Stained in Grenacher's Alcoholic	
-	Borax Carmine	200
Example 3.	Preparation of a Wholemount of 33-hour click Embryo, Using the Alum	
-	Hematoxylin Stain of Delafield	206
Example 4.	Preparation of a Wholemount of a Liver Fluke, Using the Carmalum Stain of	
	Mayer	212
Example 5.	Smear Preparation of Monocystis from the Seminal Vesicle of an Earthworm	216
Example 6.	Smear Preparation of Human Blood Stained by the Method of Wright	219
Example 7.	Staining a Bacterial Film with Crystal Violet by the Technique of Lillie	222
Example 8.	Demonstration of Gram-positive Bacteria in Smear Preparation by the Method of	
	Gram	225
Example 9.	Demonstration of Tubercle Bacilli in Sputum by the Technique of Neelsen	227
Example 10.	Preparation of a Squash of the Salivary Clands of Drosophila Stained in LaCour's	
	Acetic Orcein	230
Example 11.	Preparation of a Transverse Section of a Root, Using the Acid Fuchsin – lodine	
	Green Technique of Chamberlain	233
Example 12.	Preparation of a Transverse Section of the Small Intestine of the Frog Stained with	
	Celestine Blue B-Eosin	237
Example 13	Preparation of a Transverse Section of a Stem of Aristolochia Stained by the	
	Method of Johansen	245
Example 14.	Demonstration of Spermatogenesis in the Rat Testis, Using the Iron Hematoxylin	
	Stain of Heidenhain	250
Example 15.	Preparation of a Transverse Section of the tongue of a Rat, Using Celestine blue B	
	Followed by Picro Acid Fuchsin	255
Example 16.	Preparation of a Transverse Section of Amphioxus, Using the Acid Fuchsin –	
	Aniline Blue – Orange G Stain of Mallory	258
Example 17.	Demonstration of Diplococci in the Liver of the Rabbit, using the Phloxine –	
	Methylene Blue – Azur II Stain of mallory, 1938	261
Example 18.	Preparation of a Series of Demonstration Slides, Each Having Six Typical	
	Transverse Sections of a 72-hour Chick Embryo, using the Acid Alum	
	Hematoxylin Stain of Ehrlich	264

PART FOUR : RECOMMENDED TECHNIQUES	
Animal Organs	271
Animal Tissues	277
Animal Cytology	279
Plant Organs	280
Plant Tissues	282
Plant Cytology	284
Suggested Additional Sources of Information	286
Index	289