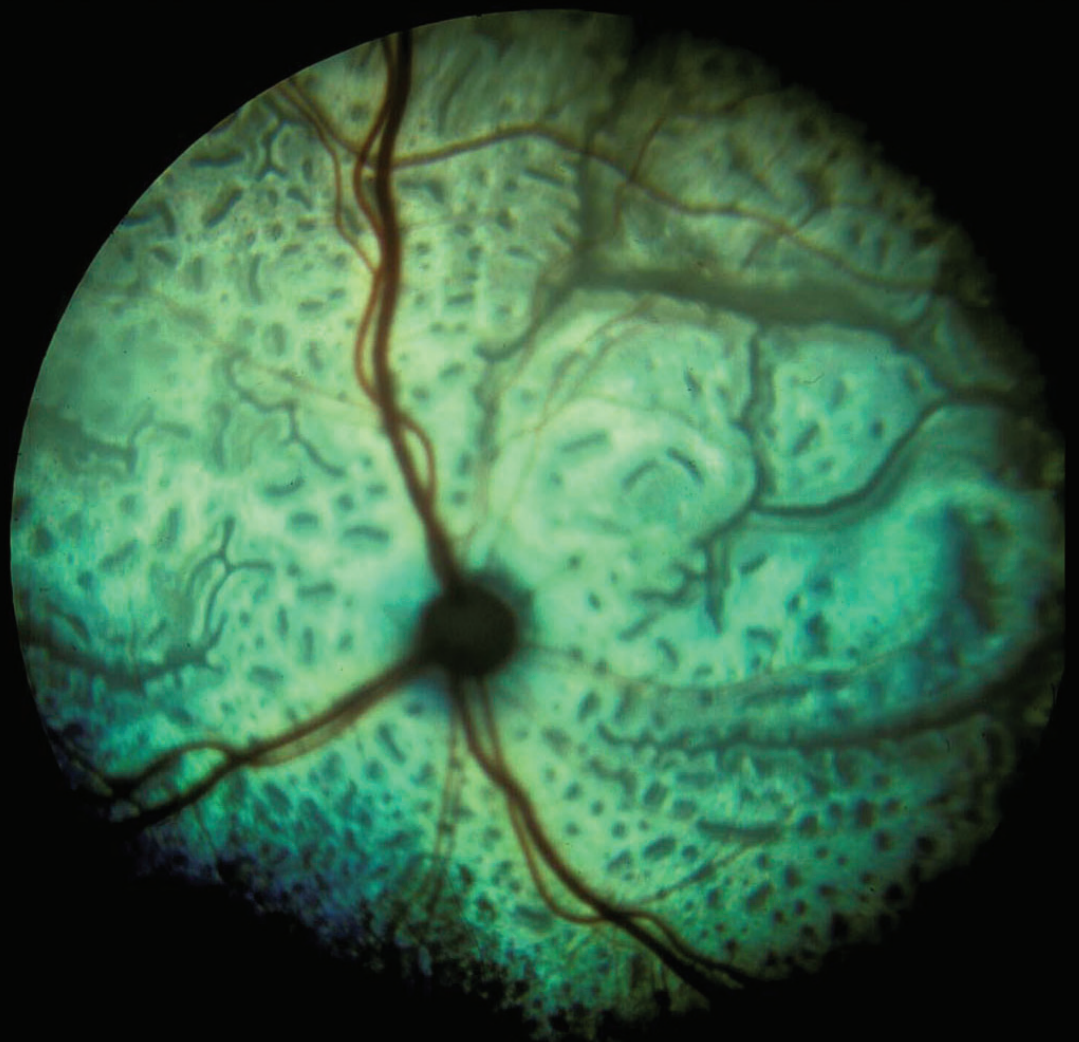
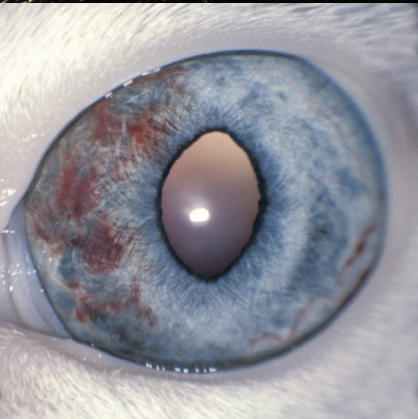
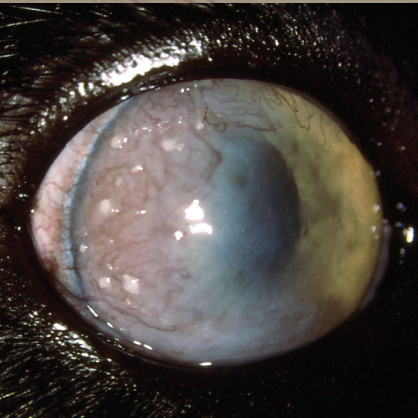
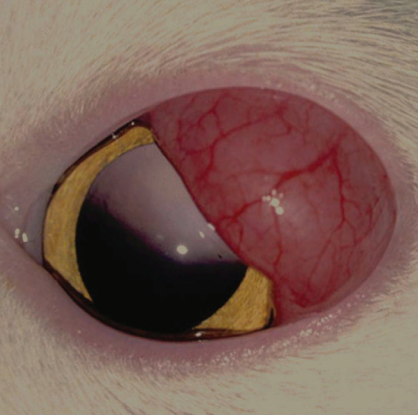


SECOND EDITION

Atlas of Feline Ophthalmology

Kerry L. Ketring and Mary Belle Glaze



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Atlas of Feline Ophthalmology

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Second Edition

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Preface

Who can believe that there is no soul behind those luminous eyes!
— Théophile Gautier, French writer and critic

Has it really been 18 years since we completed our first feline atlas? Since that publication, the feline population has reached 83 million and the cat has surpassed the dog as the most popular pet in the United States. An increasing number of veterinarians cater preferentially or exclusively to feline patients. And now there is digital photography!

As before, our goal is to illustrate the normal and abnormal feline eye as seen in clinical practice. We had intended to make the first atlas timeless by concentrating on its images and excluding treatments likely to change with time. However, previously unrecognized pathogens and ongoing investigations of classical disorders have expanded the panorama of ocular disease in the cat. Approximately one-third of the 394 images in this edition are new. We have replaced a number of photos from the first edition with superior images, included more examples of common disorders, and added figures of ocular diseases that were not recognized in the feline eye in 1994. New entries include lesions of emerging systemic infections such as bartonellosis and aspergillosis and of novel agents including *Encephalitozoon cuniculi* and *Mycobacterium* spp. Examples of herpetic blepharitis and mycoplasmal keratitis suggest the familiar pathogens may be more pervasive than once supposed. Agents such as leishmania are noteworthy additions to the image bank as global travel facilitates the movement of foreign pathogens. Sclerosing pseudotumors, cystadenomas, iris abscesses, septic lens implantation, and aqueous misdirection syndrome round out the cast of recent characters impacting the feline eye.

The atlas is meant to serve as both a diagnostic reference with which to compare a patient's clinical signs and a colorful tool for educating its caregivers. Images are arranged anatomically, beginning externally with globe–orbit relationship and concluding with disorders of the retina and optic nerve. Each photo is accompanied by diagnosis, signalment, and a

description of the pertinent ocular lesions. Keep in mind that some patients were examined more than 30 years ago, with clinical conclusions based on then-current differentials and testing. In light of today's expanded list of etiologies and diagnostic modalities, we concede that alternative diagnoses likely exist in some of these cases.

The table of contents outlines lesions structurally and lists each figure according to diagnosis. A new addition to the atlas is an appendix that groups figures by etiology rather than structure. This format makes it possible to retrieve every image linked to a selected agent or disease and better exposes the widespread effect of these various disorders on ocular health. As an example, lesions of lymphosarcoma can be found within the orbit, eyelid, conjunctiva, anterior uvea, retina, and optic nerve. Once a diagnosis is made (hopefully with the aid of the atlas), readers can then refer to the bibliography, available ophthalmic texts, or online resources for ever-changing therapeutic recommendations.

We are fortunate to have known these wonderful animals and their devoted families. Our thanks go to the referring veterinarians and ophthalmic colleagues who generously shared their patients, images, and expertise to help illustrate the beauty and resiliency of the feline eye. We sincerely appreciate the encouragement and support of our Wiley-Blackwell editors—Erica Judisch and Nancy Turner. We are without question indebted to Marsha Ketring, without whom this project would never have been completed. The countless hours she devoted to digitizing images archived as 2×2 slides and to refining colors and features to accurately recreate the original figures have made this atlas the best it can be. Frankly, her name belongs on its cover.

Kerry L. Ketring
Whitehall, Michigan

Mary Belle Glaze
Houston, Texas

Contents

The Table of Contents is presented in outline form to make it as useful and informative as possible. The figures have been grouped into 12 main sections, each corresponding to a condition or specific area of the eye. The initial subheads identify the disease, condition, or injury. Subsequent subheads are used to define specific aspects of each figure. Some figures are referenced more than once because they depict more than one clinical sign or condition; thus the numbers of the figures do not always appear in sequential order.

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Breed Predispositions to Ocular Disease

ABYSSINIAN

Progressive retinal atrophy: Rod-cone degeneration
Narfstrom 1985; Stiles and Townsend 2007; Narfstrom et al 2009; Menotti-Raymond et al 2010

Progressive retinal atrophy: Rod-cone dysplasia
Curtis, Barnett, Leon 1987; Stiles and Townsend 2007

BIRMAN

Corneal dermoid
Hendy-Ibbs 1985; Stiles and Townsend 2007

BRITISH SHORTHAIR

Cataract
Irby 1983

BURMESE

Corneal dermoid
Hendy-Ibbs 1985; Stiles and Townsend 2007

Corneal sequestration
Pentlarge 1989; Narfstrom 1999

Eyelid coloboma
Koch 1979

Glaucoma
Hampson, Smith, Bernays 2002

Lipid-laden aqueous
Gunn-Moore, Crispin 1998

Third eyelid gland prolapse
Chahory et al 2004; Stiles and Townsend 2007

DOMESTIC SHORTHAIR

Corneal dermoid
Hendy-Ibbs 1985; Stiles and Townsend 2007

Lysosomal storage disease
Stiles and Townsend 2007

HIMALAYAN

Cataract
Rubin 1986

Corneal sequestration
Pentlarge 1989; Morgan 1994; Narfstrom 1999

Eyelid cystadenoma
Chaitman, van der Woerd, Bartick 1999

KORAT

Lysosomal storage disease (GM₁ and GM₂ gangliosidosis)
Stiles and Townsend 2007

MANX

Corneal dystrophy
Bistner, Aguirre, Shively 1976

OCICAT

Progressive retinal atrophy: Rod-cone degeneration (*rdAc*)
Menotti-Raymond et al 2010

PERSIAN

Chediak-Higashi syndrome (Blue smoke variety)
Collier, Bryan, Prieur 1979

Corneal sequestration
Pentlarge 1989; Morgan 1994; Narfstrom 1999; Featherstone and Sansom 2004

Entropion
Narfstrom 1999; Williams and Kim 2009

Eyelid coloboma
Bellhorn, Barnett, Henkind 1971

Eyelid cystadenoma
Chaitman, van der Woerd, Bartick 1999; Cantaloube, Raymond-Letron, Regnier 2004; Giudice et al 2009

Idiopathic epiphora
Stiles and Townsend 2007

Lysosomal storage diseases
Stiles and Townsend 2007

Progressive retinal atrophy (early onset)
Rah et al 2005

SIAMESE

Convergent strabismus and nystagmus
Johnson 1991

Corneal sequestration
Pentlarge 1989; Narfstrom 1999

Glaucoma
Jacobi, Dubielzig 2008

Lens luxation
Olivera et al 1991

Lysosomal storage diseases
Stiles and Townsend 2007

Periocular leukotrichia
Scott, Miller, Griffin 2001a

Progressive retinal atrophy
Giuliano, van der Woerd 1999