

## BIRDING AT A SOLAR ECLIPSE

by Leif J. Robinson, Wellesley

For many decades, astronomers have noticed that animals, insects, and plants react to a total eclipse of the sun much as they would a sunset. But only very recently have trained biologists examined this behavior. The first such study I can recall was at the 1972 total eclipse. A team from the Scripps Institute of Oceanography, aboard the cruise ship *Olympia*, measured the changing depth of plankton as the moon covered and uncovered the sun, resulting in a midday dimming and brightening of the sky.

The midday eclipse that occurred May 30, 1984, was not total (the moon completely hides the sun), but it was so nearly so that many eclipse watchers saw all the phenomena normally associated with a total eclipse: the sun's red inner atmosphere, its outer atmosphere (corona), and planets at midday.

I have never seen a report that describes eclipse-related activity for several species of birds. One only finds general comments such as "cocks crowed" or "birds sang and then went to roost." So here are my observations for May 30, as tape-recorded at Greer, South Carolina. In the table below is given the time in minutes (') and seconds (") [rounded to the nearest ten seconds before (+) and after (-) the central eclipse] at which a particular activity was observed. This is followed by the species involved, and the type of activity.

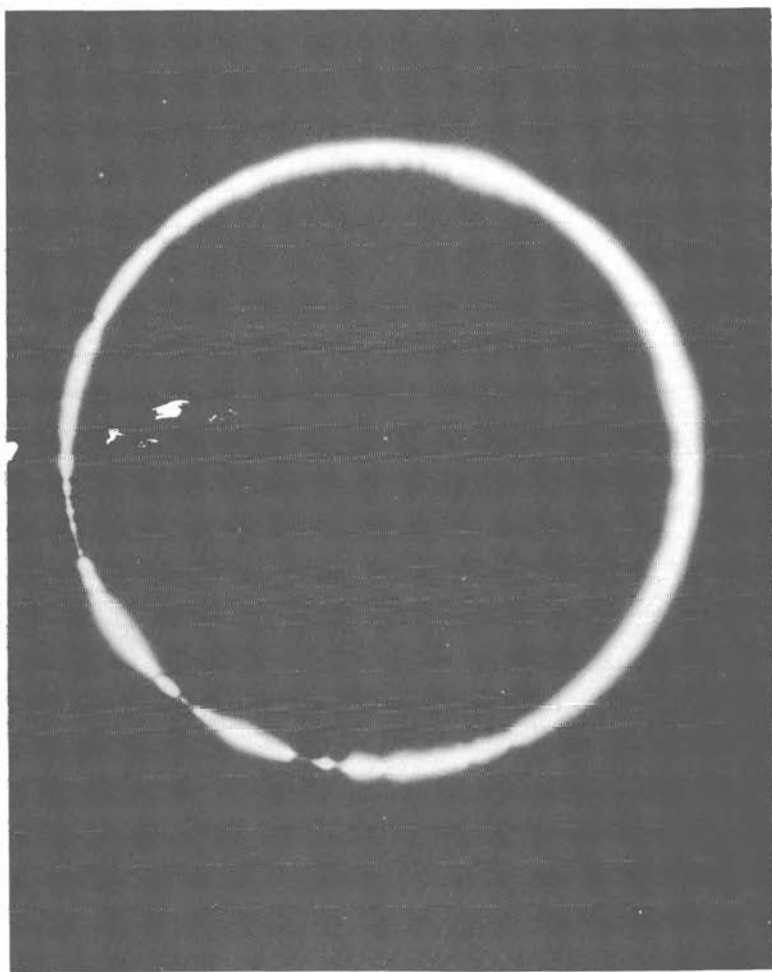
<u>Time</u>	<u>Species</u>	<u>Activity</u>
+12'50"	Rufous-sided Towhee	Singing.
+11'30"	American Robin	Going to roost.
+11'00"	Rufous-sided Towhee	Singing.
+10'50"	Chimney Swifts	Becoming lower in sky.
+09'00"	Carolina Wren	Begins 1'10" of song; only evidence of this species during 5 hours on site.
+05'00"	American Robins	Several singing for some tens of seconds.
+04'40"	Northern Flicker	Calling.
+04'20"	American Robin	Singing.
+02'30"	American Robin	Sings again; about 20 seconds.
+02'20"	Chimney Swifts	Now at treetop level.
+01'40"	Turkey Vulture	Appears on scene; lands.

Interval of 02'20" in the middle of which the central eclipse occurs and lasts for 8 seconds. During the entire time, no activity was observed.

-00'40"	American Robin	Singing.
-02'50"	Blue Jay	Leaves roost.
-03'50"	Rufous-sided Towhee	Calling accented "zeep."
-60'00"	Turkey Vulture	Circling high in the sky.

This ring eclipse was so dark that the sky took on the appearance of moderately bright twilight. It was also very different from a total eclipse - the sun was surrounded by a fireworks pinwheel, not a placid aureole. An even better "Fourth of July" will be celebrated in March, 1987, when a similar ring eclipse crosses Gabon, Africa. Join me!

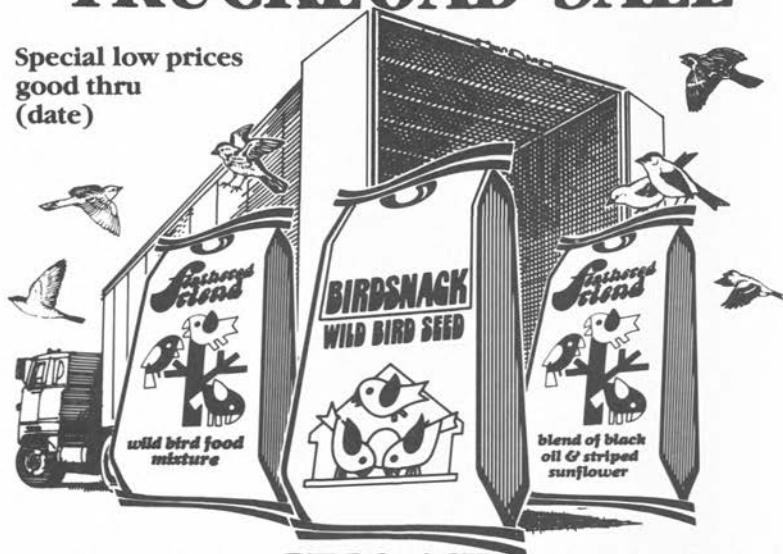
LEIF J. ROBINSON is editor of Sky and Telescope. He has been a bird student for sixteen years, was formerly editor of Bird Observer, and continues to contribute regular to BOEM. His principal interest is in resident populations of birds and the migration of birds of prey.



*The May 30, 1984 Ring Eclipse  
Greer, South Carolina  
Photographed by Leif J. Robinson  
with a Bausch & Lomb/Criterion 4000 Telescope*

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