

SPACE BIRDS:

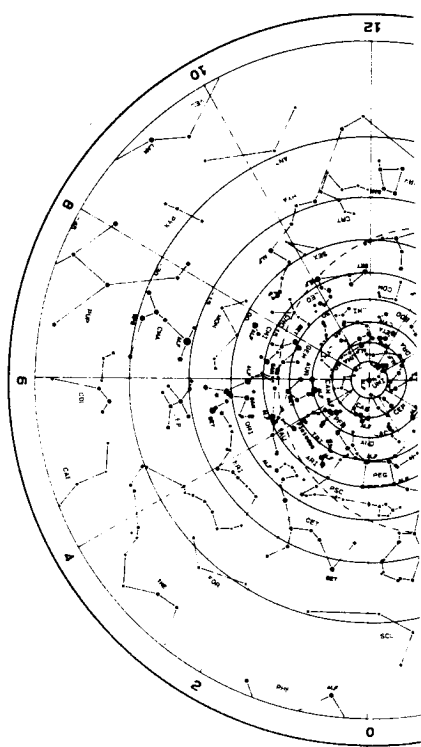


**A Program for Predicting the
Naked-Eye Visibility of Artificial
Near-Earth Satellites**

Or ...

**"How to Find and Observe
Avis caelestis proxima
in its Native Habitat"**

by R. L. Mansfield, M.O.S.O.



System Requirements

**IBM PC, XT, or Compatible with PC-DOS or MS-DOS
Version 2.0 or higher, one 360 KB (Kilobyte)
flexible disk drive, plus one of the following:**

- **512 KB RAM (Random Access Memory) and RAMdisk (electronic disk) creation software, or**
- **128 KB RAM and a second 360 KB disk drive, or**
- **128 KB RAM and a 10 MB (Megabyte) hard disk drive**

Epson MX, FX, RX or other printer optional

A Primer on Space Ornithology

The artificial near-earth satellite or space bird, *Avis caelestis proxima*, is a recently-differentiated species of bird which inhabits the exosphere. Space birds fly, by definition, in almost-circular orbits, in the approximate altitude range of 200 to 2000 kilometers, taking between 88 and 125 minutes to complete one orbital revolution.

Space birds range over all latitudes and longitudes, crossing the equator at points which shift westward about 25 degrees from one crossing to the next, due to earth rotation. They regularly make 12-16 northerly equatorial crossings per day, depending upon the periods of revolution of their orbits.

Space birds feed on tax monies (mainly dollars, both U.S. and Canadian; francs; guilders; marks; yen; rubles and rupees; pesos and pounds sterling). But they also make use of energy from internal chemical or nuclear-fueled "organs." Noteworthy is the ability of some to turn sunlight into work, via solar panels which collect and convert the light, just as terrestrial birds consume and digest seed, then store the carbohydrate component as fuel for the alar musculature.

While terrestrial birds are classified chiefly by the adaptations of their feet, space birds are classified into subspecies by their primary missions, for example: communications; earth surface imagery (video, photo, and radar); geodesy; infrared astronomy; navigation; signal detection and recording; weather.

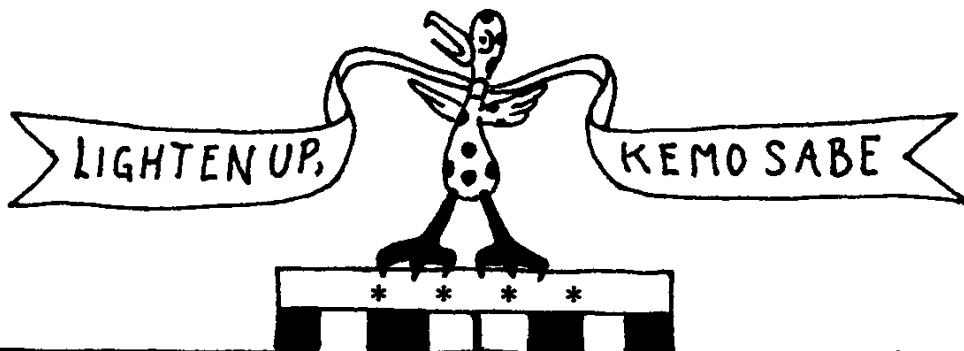
Inter-special predation, reminiscent of the hawk and sparrow, has been reported in some space birds, and has been described in the technical literature as "anti-satellite operations." Space birds have the following distinguishing behavioral characteristics.

- Space birds are shy; they only appear when the sun catches them. They prefer to slip silently by in the wash of the full moon, even when the sun angle is most favorable. Night binoculars (7x50) are often needed to find them.

- Space birds are **crepuscular**; you'll only see them near dawn or dusk, when you are in the earth's shadow and they are in the sun's light.
- Space birds are **punctual**; when you go out to find one, synchronize your watch ahead of time with the National Bureau of Standards by calling (303) 499-7111.
- Space birds are **fleet**; you'll only have at best about ten-to-twelve minutes to sight and follow one on a given orbital revolution.

To find space birds you will need to learn the stars, because the night sky constellations are their habitat. But with preparation and care, you too will become a seasoned Space Ornithologist, qualified for membership in the ancient and august M.O.S.O.

Roger L. Mansfield
April 1, 1987



MACULATE ORDER OF SPACE ORNITHOLOGISTS

"Pater filiusque per aspera, ad aves et saeculum saeculorum."

