

# HYPERCARD CHAOS

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This is a Macintosh based introduction to the quantitative appreciation and analysis of chaos for scientists. It is aimed at those who have a working knowledge of the mathematics generally taught in the first few years of University study---in particular, differential equations and matrix eigenvalues and eigenvectors.

- To start to use this hypercard based introduction to chaos just double click on the *chaos* stack in the folder *hyper-chaos*.
- Move from card to card by clicking on the arrow keys: the two arrows at the middle of the bottom of every card move to the next/previous card in the sequence; the arrows on a *contents* card move directly to the relevant section; while the arrow on the bottom right of every card returns directly to the title card.
- All the buttons activate computer demonstrations of the developing ideas. The *animate* buttons use the rather large data files in the *Ross...* and *Birk...* folders.
- The compiled computer demonstration programs are in the *bin* folder. You may have to tell your *Hypercard* application to look there for the compiled applications.
- Almost all of the computer demonstrations require keyboard input---I have put in what I hope are appropriate prompts. Some general rules are:
  - type the return key to exit from the infinite loops which are used to create many of the plots;
  - type a zero or negative number to exit from loops which prompt for parameter values;
  - in a demonstration with a number of stages, whenever the blinking cursor appears type the return key to proceed to the next stage;
  - for the *zoom-in* programs, type the return key to stop the plotting, and then either click where the next zoom is to centre on, or click at the very top left of the screen.
- I welcome your reactions and *constructive* criticisms.