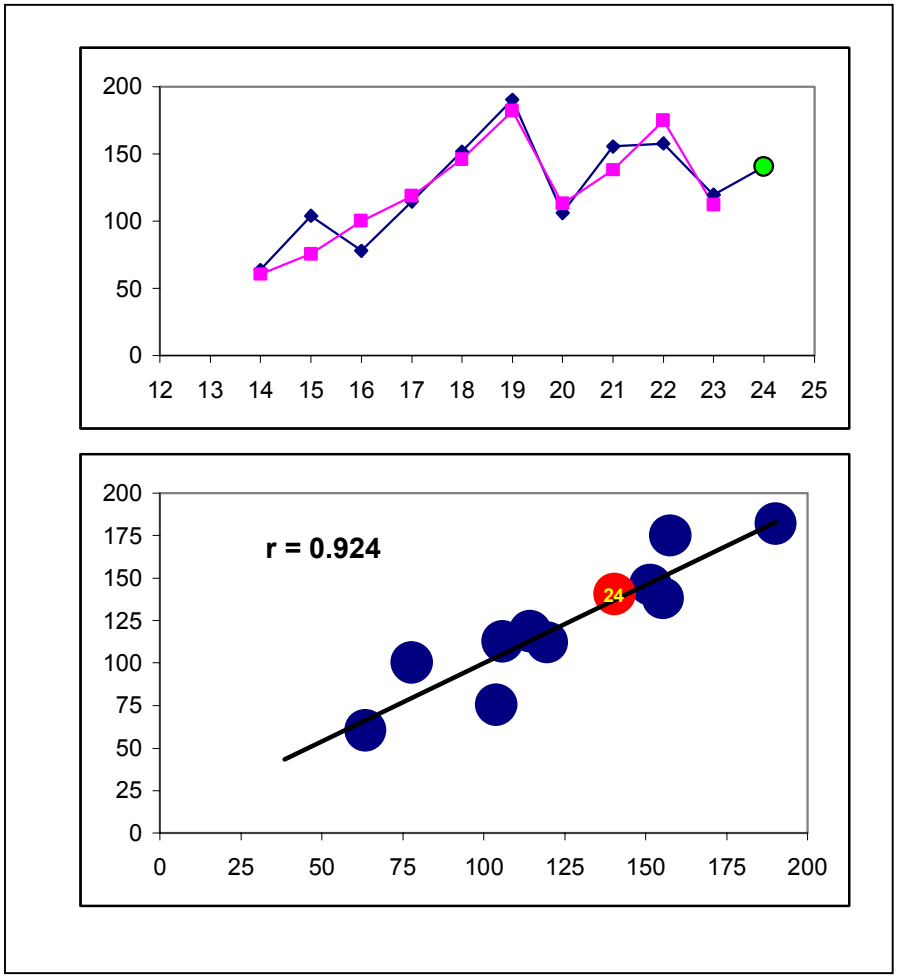
Grow-N-Crash

We stipulate that cycles grow and grow until they are too large, then they crash, and the process repeats. Using this simple concept on recent cycles (since #13) we construct a numerical model that has a certain amount of "predictive power", at least when it comes to past cycles. The top Figure shows Rmax for observed cycles (blue diamonds) and 'simulated' cycles (pink squares). Predicted cycle 24 is shown (at 140) as a green circle:



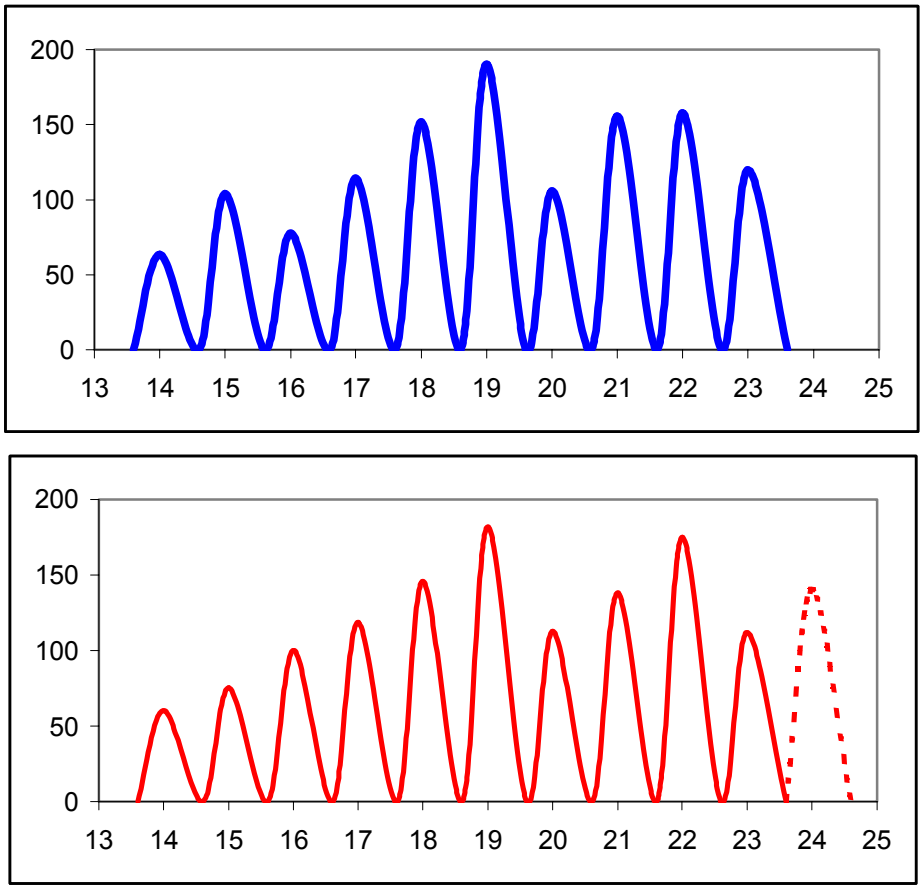
The bottom Figure shows the correlation (r=0.924) between observed and 'simulated' cycles. It does seem to be easy to construct models with seemingly large 'predictive' power.

The source code (in an obsolete programming language) for the model is shown below. There are two adjustable parameters. By fiddling one might find values that give an even better correlation:

```
    COMPUTE ALPHA = 0.238
    COMPUTE R-TOP = 200

PREDICT-CYCLE.
    COMPUTE P-NBR = C-NBR - 1
    COMPUTE R-ADD         = R-OBS(P-NBR) * ALPHA
    COMPUTE R-PRE(C-NBR) = R-PRE(P-NBR) + R-ADD
    IF R-PRE(C-NBR) > R-TOP
        COMPUTE R-ADJ = (R-OBS(P-NBR) ** 0.5) * 5
        COMPUTE R-PRE(C-NBR) = R-PRE(C-NBR) - R-ADJ - R-ADD
    .
```

One can also plot the cycles with a standard "body" (blue = observed; red = predicted):



This creates the illusion of many more degrees of freedom and makes the 'prediction' even more "stunning" (M. Knölker).