

## Shucks or Ducks: Forecasts Vary

**E**VERY year about this time experts come out with a rash of forecasts of a cold, hard winter and changes in the world's climate.

In the old days, people looked for simple signs, such as thicker shucks on the corn, ducks flying south earlier than usual, pigs gathering sticks, squirrels putting away extra nuts and thicker hair on the backs of animals.

Now, meteorologists and other sorts of scientists use weather satellites, computers, various scientific devices and guesswork to predict weather over short and long periods. Results seem to be just as reliable as those from earlier methods.

The safe way to predict weather is to forecast what may happen 50 or 500 years from now. This course is favored by those who say that the world (1) is warming up and the polar ice caps may melt to inundate seacoast cities, or (2) that we are on the verge of a mini-ice age that may freeze us to death.

Man existed on this planet thou-

sands of years without centralized weather data, sophisticated precipitation gauges and wind velocity devices, but he has always been affected by and concerned with what the weather is and what it will be.

Only within the last century has there been anything like a worldwide weather reporting system. Only within the last decade have satellites been able to observe weather from the sky.

Available weather records have been fed into computers and scientists can call for printouts giving the most likely odds for changes based upon existing conditions. Then experts add their judgments. The system is not infallible.

Deductions based upon historical records and certain assumptions indicate that the last ice age occurred about 18000 B.C. As the ice melted, food grew and the human race populated additional areas. Some places have become overpopulated.

Forecasters willingly provide an ample variety of forecasts. Causes of anticipated changes are attributed to such things as sun spots, the jet stream and manmade changes in the environment. Even radio and TV have been blamed.

A spokesman at the National Center for Atmospheric Research, Boulder, Colo., explained it this way: "We can tell you what's happening but we aren't at all sure why."

"The bitterest winter in the century has been followed by the worst summer of the last 100 years," said a professor at Massachusetts Institute of Technology. "This winter it will be colder — possibly record cold — and wetter than normal."

Political aspects of weather have been accentuated by our heavy demand for energy and fuel and by efforts to control energy resources through federal agencies.

In weather, as in politics, we should prepare for the worst and hope for the best.