

## SCIENCE AND PSEUDOSCIENCE

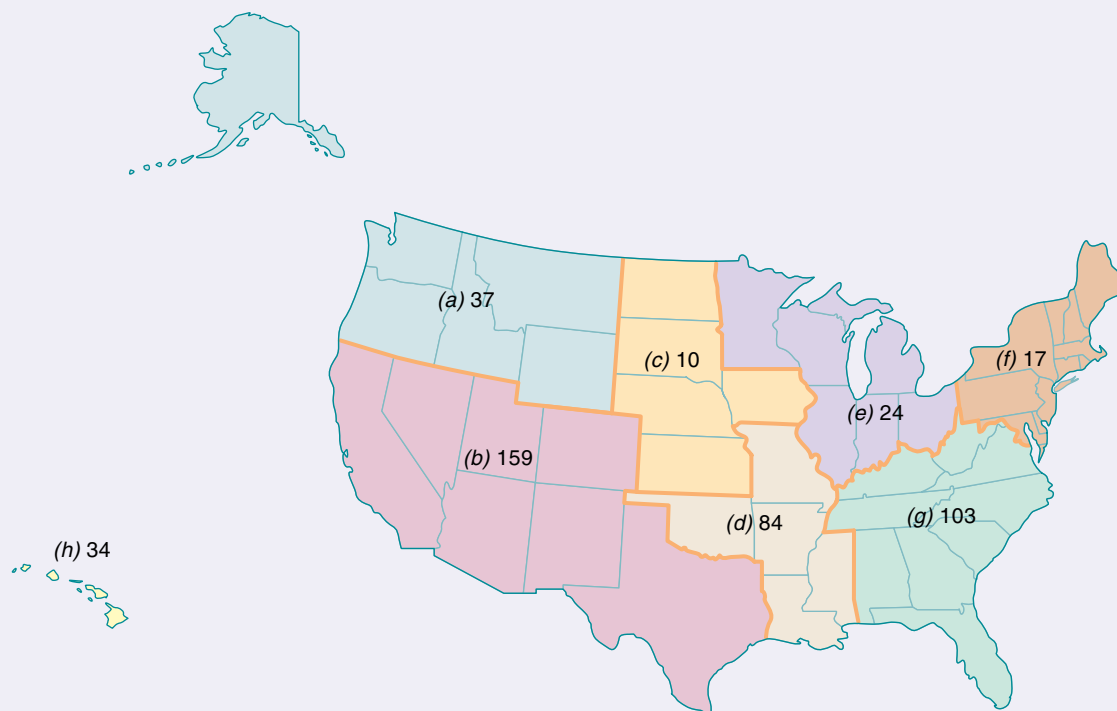
The history of science has shown that science works well. In science, no questions should be avoided, and no concepts are sacred. The scientific community's inevitable scrutiny of a person's research provides a mechanism for exposing false statements and faulty methods. Science thrives on researchers pointing out errors in a current explanation, and proposing and testing an alternative hypothesis. Further testing eventually refutes the results of "bad science."

Pseudoscience is the representation of ideas or beliefs as scientific without scientific basis. Pseudoscience is usually more dangerous than bad science because its tenets are not open to testing and disproof, and because it is sometimes difficult to recognize. If the beliefs of a group are represented as scientific but are actually assumptions that are not open to testing, then they are the product of pseudoscience.

Pseudoscience should never be considered harmless fun because people unfamiliar with the scientific method find it difficult

to distinguish science from pseudoscience. Hitler's claim of the superiority of his race, the use of extrasensory perception to solve crimes, psychic surgery, and many other manifestations of pseudoscience have wasted lives and millions of dollars. Unfortunately, our modern world seems obsessed with pseudoscience. A few of its manifestations are listed here. Can you think of others?

astrology	water witching	tea leaves
Bermuda Triangle	Loch Ness monster	"evil eye"
telepathy	ghosts	Ouija boards
precognition	pyramidology	perpetual motion
telekinesis	full moon criminality	psychics
remote viewing	palmistry	creationism
bleeding statues	numerology	UFOs



### FIGURE 1

**Map Showing Approximate Numbers of Endangered and Threatened Species in the United States.** Because the ranges of some organisms overlap two or more regions, the sum of all numbers is greater than the sum of all endangered and threatened species. (a) Northwest region, including Alaska. (b) Southwest region. (c) Great Plains region. (d) Mississippi Valley region. (e) Great Lakes region. (f) Northeast region. (g) Southeast region. (h) Hawaii. The total U.S. species is 1230. (Miller/Harley: *Zoology*, 5<sup>th</sup> ed. © The McGraw-Hill Companies.)