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## Shades of the Sacred Grove

The animistic habit of thought, which attributes human purposes and characteristics to nonsentient organisms such as living plants, is widely followed by primitive man. The trees of the sacred groves of ancient Europe were thought to have souls and to be sensitive to pain; severe penalties were imposed on anyone who cut off a branch or injured the bark of a sacred tree; propitiatory rites were often enacted to gain a tree's forgiveness if it became necessary to fell it. Similar views were also commonly held about nonliving things. Darwin, in his account of the voyage of H.M.S. *Beagle*, tells of an amusing incident that illustrates the distinction between a scientific and an animistic explanation of an event. When he and his guides were camping at an elevation of about 11,000 feet in the Chilean Andes, they attempted to cook potatoes by boiling. Even boiling overnight was unsuccessful. The scientific explanation was, as Darwin knew and pointed out to his readers if not to his uneducated guides, simply that water boils at low temperature at high altitudes. The guides had another explanation, which was "that the cursed pot (which was a new one) did not choose to boil potatoes."

Animism, prescientific though it is, is still with us. The gambler entertains animistic thoughts about dice and slot machines, and the gardener may say that azaleas "prefer" an acid soil. Such informal and private views may be excused if not condoned. It is harder to excuse, much less condone, the publication of animistic interpretations in the press.

A notable instance of such publication is in the article "Revolution Rocks the Plant Kingdom!" which appeared in the 26 June issue of *This Week* magazine. Here is animism at its worst. Plants are said to be "a good deal more sensitive than anyone ever suspected," and when "injured they try to get revenge by spreading their own brand of poison." L. Ron Hubbard, the promoter of "dianetics," who is described as an American scientist, is quoted as saying that plants can feel pain and worry. According to the article, Hubbard has been applying a skin galvanometer to tomatoes, "like the one used on humans to detect emotional changes such as fear and guilt. When a nail is stuck into a tomato, the indicator on the galvanometer dial quivers and begins to fall." The reports of others, some of them scientists of good repute, are twisted to fit into the animistic framework: plants can be "confused" by being grown upside down or "bamboozled into believing" that winter is approaching if they are shaded for part of the day. Putting citrus plants "to sleep" with tranquilizers is said to help them resist frost.

This is irresponsible journalism. It presents a false view of nature and a false view of science. It fails to distinguish the work of genuine scientists from that of quacks. The remedy is obvious. No editor would assign a tone-deaf writer to review a concert or a person with no special knowledge of the theater to review plays. Science demands no less. Several hundred professional science writers with high standards, a sharp eye for chicanery, and a professional organization—the National Association of Science Writers—are available. Why not make more use of them?—G.DuS.