American biophysicist estimated killed 50,000—may well have been a turning point, stirring public indignation and indirectly hastening the collapse of the Soviet Union. Cold Warriors may thus gloat while reading *Ecocide*. But what happened in the Soviet Union—where resources that should have supported sound health and ecological policies were diverted to military use—was, Feshbach and Friendly show, in some respects only an amplified version of what has happened in the United States and other industrialized nations.

THE DIVERSITY OF LIFE. *By Edward O. Wilson. Harvard. 424 pp. $29.95*

Would you like to have a species of flora or fauna named after you? Then take note of Harvard entomologist Wilson's observation that in a tropical rain forest today the variety of species is so great that "the chances are high, in fact certain, of finding a new species . . . within days or, if you work hard, hours after arrival."

Wilson is not writing a travel prospectus for an Amazon tour. He is America's most renowned sociobiologist, studying the correlation between environment and behavior, and here he examines how the present destruction of ecosystems—rainforests, coral reefs, grasslands—may affect life on this planet. Five times before, he tells us, the Earth has suffered "extinction spasms." Meteor strikes, volcanic eruptions, or extreme climatic changes have variously wreaked havoc on the planet's biological population. Ten to 100 million years of evolution were required to repair the damage wrought by each of the cataclysms. Wilson warns: "The sixth great extinction spasm of geological time is upon us," this time wrought by that biological latecomer, man. At the current rates of extinction, by the year 2020 we may "lose at least one-quarter of the Earth's species."

Many people who live far away from rain forests, or any forests, may wonder whether the world will really be a poorer place if the occasional snail darter or spotted owl is lost. Wilson has an answer to their insouciance. Only about 1.4 million species out of a total of between 10 and 100 million have been "discovered," in the sense of having had a scientific name applied to them. Of these, "fewer than 10 percent have been studied at a level deeper than gross anatomy." Consequently, our knowledge of life on this planet is limited to the study of less than one percent of its inhabitants. With the extinction of countless unknown species, Wilson writes, "new sources of scientific information will be lost. Still undeveloped medicines, crops, pharmaceuticals, timber, fibers, pulp, soil-restoring vegetation, petroleum substitutes, and other products and amenities will never come to light."

Besides this forfeited cornucopia, there is another reason to halt the elimination of the Earth's fauna and flora. Scientists, Wilson says, "entertain only a vague idea of how ecosystems work." Nor do they know when a vanished species will prove to have been a "keystone species," one that provides the foundation for an entire ecosystem. Although it might seem plausible to dismiss many species, say of bugs and weeds, as unimportant, Wilson reminds us that "an obscure moth from Latin America saved Australia's pastureland from overgrowth by cactus." Even so seemingly minor a change as in the pH in seawater will cause the kelp to die, and, when that happens, whales that feed on kelp wash up and perish on the shore. Wilson's roster of crucial species adds up to an impressive brief for the living kingdom.

It may need that defense. Many people find nothing wrong in a world in which medicines would be synthesized only from chemicals, food grown only from domestic crops, and the air and climate "regulated by computer-driven fusion energy." The belief "that people can flourish apart from the rest of the living world" is of quite recent vintage, Wilson says, and could be a delusion. The life-sustaining ecosystems that enrich the soil and create the very air we breathe depend upon innumerable tiny animals and organisms—in other words, on weeds and bugs. If we sever our connection to this biodiversity, Wilson concludes, our fate could be like that of the whales that suddenly strand themselves on strange shores.