Authors' dinner address - Davis

What is happening to the environment is becoming a major concern of conservationists. It should be a concern of all of us, but most people don't know what they do to the environment because they don't know what it contains. And furthermore they don't care. They think that somehow nature will take care of any damage done - that it will only be temporary. They are right about nature, but they might be surprised and alarmed by nature's remedies. Nature is not committed to man. Man is just one more animal - one more failure, perhaps - in the long list of animals that have been discarded over the eons because they were not well enough adapted to living with their fellows on the planet.

The ignorance of the common man about the environment is not surprising in view of the acknowledged ignorance of ecologists and biologists, the recognized experts on the inter-relationships of living things. These specialists are free to admit their ignorance. Relationships are so complicated, they warn us, that almost any damage we make in the environment could have effects much more far reaching than anything we can even imagine. But in spite of these warnings institutions and individuals go blindly ahead working their short-sighted programs for gain or for political advantage with no thought for the future. Not only is

the ecology of our surroundings an almost unknown and unexplored province, little is known about their total content. We don't yet know what we have, so how can we go ahead with any confidence altering it. Nevertheless programs for exploitation or control are mounted without even the superficial consequences having been ascertained - or even an attempt made to ascertain them. We are perpetually groping in the dark.

Take for instance the way we have been using innovations introduced by the technological revolution which has taken place since the end of World War II. In the field of chemicals the invention of insecticides was received as a panacea, and before we even knew how they acted, what insects they killed, or whether they produced unwanted effects on other forms of life, we were spraying them all over the landscape. It has taken us more than 20 years to wake up to the damage we did and are still doing - to damage which is effecting our lives. As long as DDT killed mosquitoes and broccoli worms why worry if it killed honey bees as well. We can get along without honey. But some people are questioning whether this price for wormless lettuces is not too high. I tend to agree. More serious, no one bothered to investigate until much later what happened to DDT after it was applied. It was found to the alarm of biochemists that nothing happened to it -

it stayed in the environment and accumulated. DDT turned out to be almost completely non-biodegradable; that is, it killed because it couldn't be destroyed in the bodies of the animals it was used to eliminate. Later /And/then strange things began to be noticed; other animals sickened and died. After much denial it finally had to be acknowledged that DDT was a general poison and furthermore that against insects, for the control of which it had been introduced with such fanfare and hope, it was becoming less effective as they developed resistant strains. But this is not the end of the disaster which DDT and related chemicals might produce. The changes it had already wrought and may still work could be irreversible - they could doom mankind himself who introduced DDT in the first place. DDT is destroying the phytoplankton in the oceans. These microscopic plants are at the bottom of the food chain of ocean life just as vegetation is at the bottom of the chain of land animals. Without vegetation we would have no meat and in fact no food at all. But worse still the phytoplankton are the major oxygen producers of the earth. If they go our source of oxygen will be in serious jeopardy. We may already have set the stage irreversibly for our eventual suffocation. But try to alert some politicans on this danger. They won't believe you, nor will they want

to believe you. If they did, and supported a ban on DDT, they might not get re-elected because they would offend the manufacturers of chlorinated hydrocarbons. Apparently it is better to suffocate along with everyone else than not to get re-elected.

This is just one small aspect of the peril we are bringing upon ourselves with our rampant technology. According to some admirers of man's innovative ingenuity - I fear a larger number than I like to admit - progress must be given free reign, and if as technology advances large pieces of the environment are destroyed, large areas of wildness wiped out, this is merely the cost we should accept for the improvements and comforts that technology brings us. These progress-at-any-cost people give little thought to the possible adverse effects of their progress. The comforts may turn out to be great discomforts. What if they drove us into a cul-de-sac of desolation from which there was no backing out because we had destroyed the potential for recovery behind us? Their acceptance without question of Man's ability to order nature for his own use and advantage, endlessly, is not a thesis supported by Man's past experience with exploitation. Men have produced deserts and dust bowls before; they could well be in the process of creating one on a worldwide scale today.

Maybe man has the power to alter consciously the course of evolution. Undoubtedly he does possess the power of life and death over many species of plants and animals, but whether he has the wisdom to decide these fates to his own advantage is in serious question. Evolution draws on diversity of species and the genetic reservoir they carry. Simplification of life reduces the possibilities for a replacement to develop to fill the empty niches that man produces. They may go unoccupied indefinitely to the chagrin of a wiser descendant. The stability of ecological systems rests on their complexity; as they are simplified they become more and more unstable, and subject to an irreversible downward trend which could lead to brought on by an unanticipated natural or man made disaster.

The greatest good which could come from the space program is not man's setting foot on the Moon or Mars; it is rather the perspective he may gain on his small vulnerable, lonely home planet. The appearance of our little, mottled, blue and white sphere from thousands of miles out should make him conscious of the exceptional conditions under which the phenomenon we call life - the only one of which we have any knowledge - originated. He should be impressed by the delicacy of the balance which has been preserved for so many hundreds of millions of years during which life has

persisted on earth. He should especially appreciate the shortness of his tenure on this globe, and use the powers he has so recently assumed to perpetuate not destroy the balance. The direction which seems to promise the greatest rewards, the surest fulfillment of the hopes and aspirations of man's troubled and inquiring spirit, and of a distant and ultimate happiness, is a course of least arrogance towards his living companions; a course even less negative than the absence of superiority - a course of humble respect for life; a sympathy which sustains a recognition of the essential interdependence of all living things.