

La Scuola wall lizard, the Israel painted frog, the smooth snake, the meadow viper and the spectacled salamander.

But it is not just a question of protecting pretty animals, according to Dr Pierre Hunkeler, the Swiss ecologist who organized the scientific side of the Athens meeting. Colonies of coastal plants and animals of great scientific interest need protection. Turkey and Greece have the richest coastal flora, followed closely by Morocco and Spain. Greece has 670 species of plants unique to the area (compared with Britain's 15) claim IUCN, and many of them are threatened.

Many of the ecosystems under attack are not yet well specified scientifically: in the wetlands, for example, like the protected Camargue (the Rhone delta), bird life is well understood but much less is known of the plants and water-dwelling animals. Ecologists and zoologists must have a chance to study these regions, argues Hunkeler, if only to give a baseline against which to measure the effects of pollution and development.

Representatives from ten Mediterranean nations had gathered in Athens by Monday: Greece and Turkey, France and Italy, Algeria, Libya, Tunisia, Israel, Yugoslavia and Malta were there. Representatives from Monaco and Cyprus were "on their way" from another meeting. The EEC was represented, but no sign had yet been seen of Spain, Morocco, Lebanon, Syria or Egypt.

The Athens meeting will avoid defining precise geographical regions to be protected. At that point, local political and development interests come into play, and costs and benefits must be worked out. If protected areas also mean protected fisheries, and increased amenities for the local populations and for tourists, then perhaps a deal can be reached which will satisfy both the ecologists and governments. But the Athens experts are leaving that to the politicians. **Robert Walgate.**

Electric cars

Win some, lose some

Washington

Plans for the development of a battery-driven electric car have taken one step forward and one step back. Scientists from the University of California's Lawrence Livermore Laboratory have announced the successful testing of a new aluminium-and-water battery which, they claim, can power cars for much greater distances than other batteries under development.

The announcement came only a few days after reports of tests by the Department of Energy (DoE) suggesting that Gulf and Western (G+W) may have been premature in some of the claims made for its new zinc-chloride battery, launched last June.

The Livermore results, presented at a meeting of the Electrochemical Society in Miami, are the products of research jointly

Plates in contact

Africa's slow movement towards Eurasia probably caused last Friday's 7.3-magnitude earthquake in El Asnam, Algeria, which destroyed 80 per cent of the city 20,000 killing perhaps people.

El Asnam, sits on a tectonic boundary between two plates — or so it appears, for the region is not seismically well characterized. The 1954, 6.7-magnitude earthquake in the same area, which killed 1,200, occurred before the world seismic monitoring network had been established. But measurements of magnetic anomalies between Africa and the United States, and between the United States and Eurasia, across the midatlantic ridge, indicate that the Africa-Eurasia boundary is closing.

The grisly event has one positive outcome: it will increase geological knowledge of the zone dramatically. Seismic stations can now pinpoint the epicentre to within 5 km, and by following the expected series of diminishing aftershocks (one of magnitude 6.2 occurred three hours after the main quake) determine the nature of the movement. This is expected to be a thrust, rather than strike-slip with Africa riding up over the Eurasian plate — the Atlas mountains themselves being part of the result.

Algerian authorities may not have a spot-on repeat of 1954; but they were criticized this week for not taking sufficient care to protect their buildings. The building codes for the El Asnam region call for stiffening to resist an extra 10 per cent weight static load, said Dr F.K. Farma of Imperial College, London, a civil engineer who made a study of the area. "But for that quake they needed 50 per cent".

Robert Walgate

sponsored by DoE and two large industrial corporations, Continental Group Inc. (working with the Lockheed Corporation) and the Diamond Shamrock Corporation.

The battery works by submersing an aluminium plate in a solution of sodium hydroxide. The reaction of the two with air produces an electric current and hydrazillite, an aluminium compound which subsequently crystallizes out so that the aluminium can be recovered.

Unlike more conventional storage batteries which require overnight charging, the new battery is claimed to need only to be refuelled with tap water every 250–300 miles. The aluminium plates would be replaced every 1,000–3,000 miles, but the operation should take only 15–30 minutes.

One drawback is the cost. Operating the new battery — including in particular the need to replace the aluminium plates at regular intervals — would cost the equivalent of between \$2 and \$3 a gallon, about twice the present US price.

However, this may still be competitive with gasoline made from coal — and it

would be as efficient to use coal for making the aluminium plates as for producing gasoline.

Meanwhile, a report in the *Wall Street Journal* that G+W is encountering technical problems in developing its zinc-chloride battery has raised questions about the extent to which the announcement was designed primarily as a publicity exercise. The newspaper quoted DoE reports that although G+W had claimed that the battery could power a standard car for 150 miles driving at 55 m.p.h., technical difficulties with charging the battery suggested that these figures were over-optimistic.

A spokesman for DoE, which has invested more than \$15 million in the G+W project, accepted last week that the development of the battery had encountered several technical difficulties, and that as a result some of the claims made by the company last June were probably premature. But he denied that the department had lost enthusiasm for the programme. **David Dickson**

Nuclear wastes

Small disposals

Washington

Much to the relief of many east coast hospitals, universities and medical schools, the Nuclear Regulatory Commission (NRC) is proposing that liquid scintillation media used for detecting low levels of radioactivity in biological samples need no longer be buried in nuclear waste disposal sites.

At present, almost all scintillation media used in this way for biomedical research, as well as the carcasses of animals in which chemicals containing radioactive tracers have been studied, have to be transported in special drums 3,000 miles across the continent for disposal.

This expensive exercise — Harvard Medical School and its associated hospitals spent almost half a million dollars last year disposing of 3,000 drums in this way — has been necessary since the state of South Carolina announced a year ago that it was no longer prepared to accept low-level wastes from hospitals and research laboratories at its Barnwell storage site. Shortly afterwards, the nation's other two radioactive waste dumps at Richland in the state of Washington and at Beatty in Nevada announced that they too were closing their doors in protest at the poor way in which low level waste was being packaged and shipped.

Alarm spread quickly through the medical research community. Scientists said that many cancer research programmes would have to stop if liquid scintillation media and animal carcasses containing trace amounts of radioactive elements could no longer be disposed of in this way. Some medical schools claimed that storage space was so tight that research