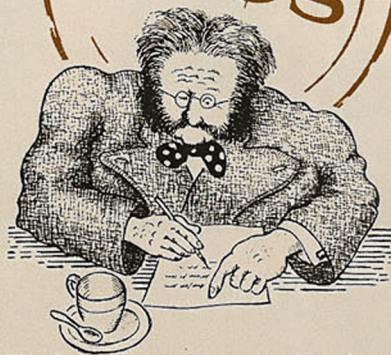


Letters to Ecos



We look forward to hearing from readers. In selecting letters for publication, preference is given to those dealing with research topics covered in *Ecos*—providing additional information or commenting on conclusions reached in articles. Please keep letters as brief as possible. When necessary, they will be edited for publication.

The address for letters is: The Editor, *Ecos*, P.O. Box 225, Dickson, A.C.T. 2602.

Woodland on farms

The article 'Loss of woodland threatens cockatoos' (*Ecos*, May 1980) concludes with a plea by Dr Saunders for wise management of Australia's woodland. As farmers with a lively interest in our local birds and, fortunately, some remaining woodland under our management, we wish to comment on the responsibility we feel for its protection, and the need to encourage other private owners of woodland to manage theirs wisely.

In many cases the preservation of this remaining woodland calls for the motivation of the owner to forgo the financial benefits flowing from more intensive agricultural or pastoral use. This motivation can spring from an aesthetic

appreciation of nature, and the realization of the importance of the basic habitat to native species.

Although farming is a business, there are many farmers who realize that the country life and landscape are enhanced by the retention of areas of native vegetation, and that some sacrifice in production is necessary to achieve this. Some balancing financial benefits can be anticipated, such as shelter for stock and timber and firewood production.

However, as ecological awareness comes slowly, and sympathy for nature is not universal in the farming community, we feel that education toward responsible attitudes to the environment must be given high priority in our schools. Training and advice in woodland management could be a great help to farmers. Such questions as weed and vermin control, plant succession on curtailment of grazing, and fire management for long-term viability come to mind.

Public assistance in the form of financial compensation for some of the costs involved in native vegetation retention on private land, such as is being implemented by the South Australian Government, we see as a valuable incentive to owners to preserve their woodland.

John and Richard Smyth
Salters Springs, S.A.

Roof slope and strong wind

As an ex-RAAF pilot, I thought there was one structural feature you overlooked in the article on building for cyclones in the February issue—namely the pitch of a building's roof.

I suggest that in conditions of high wind a low-pitched roof, whilst offering least obstruction, creates a significant fall of air pressure on the leeward side, and it

is this lifting force that tears off the roof. I suggest the condition is something like the lift forces on an aerofoil where the greater lift is on the top surface of a wing section—providing the angle of attack is within limits allowing smooth air flow.

A more steeply pitched roof would break the air flow on the leeward side into eddies and minimize fall in air pressure, thus reducing lift.

If there is substance in the suggestion, it could be that a steeper pitched roof than is the modern practice should be used in cyclone-prone areas.

F.R. Davies,
Tumut, N.S.W.

Comment by Dr R. H. Leicester, Officer-in-Charge, Structures Section, CSIRO Division of Building Research:

It is true that the wind creates smaller lifting forces on steeper pitched roofs than on flatter ones. During the past decade the forces exerted by the wind on buildings have been extensively investigated through model studies in wind tunnels and through measurements on full-scale buildings. This information is now incorporated in structural engineering design procedures recommended by the Standards Association of Australia.

In our risk study, all available structural and aerodynamic information was considered. However, field investigations of wind damage during the past decade have indicated that any engineered structure performs extremely well and that most failures are due to human error, errors that lead to omissions of a vital link in the chain of structural integrity. Consequently the model used to compute the potential for cyclone damage has been based primarily on an assessment of the possibility of error occurring in the design and construction of dwellings.