

5.0 CONCLUSIONS

A review of the world-wide data on precipitation pH in remote and exposed mid-latitude west-coast areas indicates that all precipitation contains at least small quantities of acid materials. In the absence of any neutralizing basic components this is sufficient to reduce the pH to a value of about 5.0 and in some cases less. Nowhere, though, are pH values in remote areas as low as those found in the most acidic precipitation areas of the northeastern U.S. and western Europe. The minimum median value is pH 4.6 at a few isolated locations. In contrast to this, there is a large contiguous area in eastern North America containing about 90 monitoring stations reporting annual average pH less than 4.6 and as low as 4.1. The latter value represents an increase in acidity by a factor 30 above that in "clean" rain, and clearly shows the regional influence of the concentrated man-made emission sources.

Several authors are now suggesting that the reference level of 5.6 (the pH of rainwater in equilibrium with atmospheric CO₂) is not appropriate and that departures from a value of near 5.0 would indicate the regional and local modulations to the influence of "global background".

While pH is a useful single number that characterizes the precipitation, it is the total deposition of acidity (H⁺ ions) that is important in assessing the effects on