

# ROYAL METEOROLOGICAL SOCIETY: AUSTRALIAN BRANCH MEETING

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## China: A Glimpse of How Meteorology Serves the People

H. T. Ashton

Mr Ashton visited the People's Republic of China in May 1976 as a guest of the government. His talk described the meteorological service in Kwangsi Province, an autonomous region of southeast China, on roughly the same latitude as Hong Kong. He began by comparing the status of meteorology before and after the advent of the People's Republic. Prior to 1949 there were about 100 surface observing stations in the entire country, while today the data coverage is excellent, both at the surface and in the upper air. The service is organised on a tier structure similar to that in many western countries. A central office oversees 28 provincial centres, which subdivide to about 200 prefectures containing over 2000 county offices and 10 000 posts. The posts are staffed by volunteers in the communes while all other staff are employees of the service. The Chinese meteorological service has only limited responsibilities in the field of hydrology and aviation forecasting. A major and most important responsibility is to agriculture, since 80 per cent of the total population is engaged in primary production.

The most striking differences from our meteorological organisation occur at the county and commune level, where there is vastly more involvement of the users and volunteer observers and direct liaison with the local revolutionary committee (which may be loosely compared with our local government councils). Research is very much oriented towards application and practice and all equipment is locally made, including radar. An example was quoted of the hail suppression program for which some success is claimed over the last ten years, the heads of the projectiles and chemicals for silver iodide seeding being prepared in the commune where they will be used. People's Liberation Army (PLA) units assist, using anti-aircraft guns and mortars. The Chinese central office has a three level primitive equation numerical forecast model running on their locally built computer with a more powerful computer in production.

In the Kweiping county office visited by Mr Ashton, a staff of fifteen collected 3-hourly observations, made forecasts out to 7 days, and also made some seasonal estimates. Forecasting of critical weather events for agriculture was given prime importance and a high value was placed on weather lore and local experience. The quoted success rate in this endeavour was 80 per cent, not scientifically verified. The county grows two rice crops each year, making weather forecasts quite important, particularly at the seedling stage of the first crop and the flowering stage of the second.

Mr Ashton also visited a commune weather post where he was given a 'brief' summary of their work lasting about two hours. The weather post's instrument enclosure contained all the conventional instruments. In addition, glass tanks in the adjacent office contained an eel, two fish, and water snails. A commune school enclosure contained several different weather-sensitive plants.

Mr Ashton's slides colourfully illustrated his talk as well as other aspects of Chinese life and culture. On a lighter note, he pointed out that as a guest of the Chinese government, politeness and hospitality led to much of his time being spent very pleasantly in sightseeing and banqueting, with the result that not as much time was spent on the 'official' aspects of his visit as he had initially expected.

Questions were lively and on a broad front. Asked about hail suppression successes, Mr Ashton suggested that their results encountered verification problems much as in the western world. Mr Ashton was also asked to clarify the meaning of the quoted 80 per cent success rate, to which he replied that he had no way of checking such a claim. The criteria for assessment were not spelt out precisely. On the efficiency and mode of the raw data distribution, Mr Ashton's impression was that it is slower than ours, but weather information is transmitted to the people by radio and telephone, and disaster forecast dissemination is often person to person. The position of the meteorological service in the government was described as something like a ministry, and he did not know of any equivalent of the Royal Meteorological Society. Questioned on data, Mr Ashton said that several places have continuous instrumental records for about one century, and that he has a set of temperature data from 1874 to 1970 for Shanghai.

M.V.