OUTLINES OF PHILIPPINE FRONTOLOGY

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I. INTRODUCTION

This paper is not intended to be a complete manual of Philippine meteorology, nor to cover the whole Asiatic region, but simply to serve as a preliminary, brief sketch of the air streams and fronts found in the Philippines and its vicinity, their position and movement during the year, and the depressions, cyclones and typhoons that arise and move along the fronts. The precise cloud types and weather peculiar to the different air masses and fronts, the upper air movements, complete rules for forecasting, the intimate nature of the typhoon, etc., all these are topics which must be left for later papers and researches. It must therefore ever be remembered that the scope of this present paper is definitely limited; it is truly only an introduction, an outline, but as such it can not be without interest, and may help to stimulate further endeavors on the part of others. In fact, the author anticipates that additional research may modify some at least of his ideas. In all pioneer work this is to be expected; but it appears much better to publish these ideas, crude and immature though some may be, in the interest of further possible research by others as well as by himself, rather than wait years in the endeavor personally and single-handed to perfect them.

In embryo the basic ideas expressed in this article have already been published by the author in the following papers:

Monthly Weather Review, 1933, Vol. 61, pp. 210, 284–285, 313, 338; Washington, D. C.
Manila Harbor Board Annual, 1934, pp. 25–30; Manila, P. I.
The Upper Air at Manila, Publication of Manila Observatory, 1934.
The Mean Transport of Air in the Indian and South Pacific Oceans, Manila, Bureau of Printing, 1935.

Little attempt is made in this preliminary paper to designate the fronts as cold and warm. However, this much can be said in general: Air from the north is colder than either the tropical maritime or equatorial air; but as to the relative temperatures of the two latter air streams, no matter what may be the condition in the upper air, still at the ground in our region differences of temperature are very small, and it even looks as if either current may rise above the other, depending on circumstances. Meteorologists of the temperate zone may dispute the propriety of the word "front" with such small temperature differences, but it is the opinion of the writer that the other differences in the air masses such as humidity, etc., warrant the retention of the name. Humidity differences are potent of much mischief in the tropics. The question of frontal designation is a vexing one; e. gr., the SW monsoon (or equatorial air) forms fronts with both tropical maritime and northern air (Np or P, either of continental or of maritime origin). In this paper, when no ambiguity is to be feared, the *equatorial* front will designate any front in which the air mass lower in latitude is of equatorial origin, while the *tropical* front will designate any front in which the air mass lower in latitude is tropical maritime air. The name *"polar"* front is purposely avoided, due to difficulties arising from the disturbing influence of the NE monsoon upon frontal types (cf. p. 9). If there is any chance for ambiguity, the fronts will be designated by the two air masses involved, e. gr. the Tm-Np front, the Eq-Np front, the Pc-Np front, etc.

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