

SUMMER MONSOON IN SOUTH ASIA

In his paper entitled "Summer Monsoon in South Asia", Dey (1977) has made various statements which cannot be supported by facts of observations. It is proposed to deal in this note with such statements of Dey with a view to acquaint meteorologists interested in the problem about the correct position regarding the same.

(1) It is seen from a study of the day to day synoptic charts that air mass boundaries can be definitely located during the summer monsoon (Desai 1951, Desai and Koteswaram 1951).

(2) Regarding the criteria mentioned in the paper of Yin (1949) and Flohn (1968), a reference is invited to the paper on the Indian summer monsoon by Rao and Desai (1973).

(3) Regarding Koteswaram's (1963) model, a reference is also invited to the comments on same by Rao and Desai (1973). This model was actually given by Koteswaram in his paper read in the Symposium at Delhi in 1958.

(4) A reference is invited to the paper of Rao and Desai (1973), in which comments on the role of Tibetan plateau and the release of latent heat of condensation derived from the pre-monsoon rain, has been discussed.

(5) The shift of the westerly jet stream to the north of the Tibetan plateau from its position to its south, occurs sometimes even after the setting in of the monsoon over India (Rao and Desai 1973).

(6) The conditions which are favourable for the setting in of the monsoon are discussed by Rao and Desai (1973) and Desai (1975).

(7) As shown by Rao and Desai (1973), there is no I.T.C.Z. over the area of the monsoon trough upto about 4 km, whose axis extends from near Delhi to near Calcutta at the surface. The tropical easterlies are present only above about 4 km. The easterlies to the north of the axis of the monsoon trough upto about 4 km are the deflected trades which have backed under the influence of the mountains on the Arakan coast of Burma and the Himalayas.

(8) The surges in the southwesterly monsoon current (deflected trades) give rise to the pulsatory nature of the monsoon current and the causes of this have been discussed by Desai (1972), Rao and Desai (1973) and Desai *et al.* (1976 a and b).

(9) The conditions under which depressions can form in the north Bay of Bengal during the monsoon season are discussed by Desai (1951) and Rao and Desai (1973).

(10) The factors which cause precipitation during the monsoon season in different parts

of the Indian sub-continent and the influence of the westerly troughs on the precipitation, have been discussed by Rao and Desai (1973).

It would appear that Day has apparently not seen the work on the Indian Summer Monsoon in papers published in India in the *Vayu Mandal Bulletin* of the Indian Meteorological

Society, in the *Meteorological and Geophysical Reviews (MGR)* of the India Meteorological Dep. and in the *Indian Journal of Meteorology and Geophysics* during the last ten years or so, and hence he has not been able to appreciate to what extent the facts of observations during the monsoon season do not support the various statements made by him.

173, Swami Vivekanand Road,
Vile Parle (West), Bombay
3 October 1977

B. N. DESAI

REFERENCES

- | | |
|---------------------------------|---|
| Desai, N | 1951 India met. Dep. Mem., 28, Pt. 5, pp. 217-228. |
| Desai, B. N., et al. | 1972 <i>Vayu Mandal</i> , Indian met. Soc., 2, pp. 14-15. |
| Desai, B. N. and Koteswaram, P. | 1975 <i>Indian J. Met. Geophys.</i> , 27, 1, pp. 71-76. |
| Dey, B. | 1976a <i>Indian J. Met. Hydrol, Geophys.</i> , 27, 2, pp. 141-157. |
| Flohn, H. | 1976b <i>Ibid.</i> , 27, 3, pp. 267-274. |
| Koteswaram, P. | 1951 <i>Indian J. Met. Geophys.</i> , 2, pp. 250-265. |
| Rao, Y. P. and Desai, B. N. | 1977 <i>Geogr. Rev. India</i> , 39, 3, pp. 266-280. |
| Yin, | 1965 MWO, Tech. Note No. 69, pp. 245-252. |
| | 1968 Contribution to a Meteorology of Tibetan Highland, Colorado State University (Post Collins). |
| | 1958 <i>Monsoons of the World</i> , India met. Dep. New Delhi, pp. 105-110. |
| | 1963 <i>Austr. Met. Mag.</i> , 42, pp. 35-56. |
| | 1973 <i>Met. and Geophys. Rev.</i> No. 4, India met. Dep., pp. 1-81. |
| | 1949 <i>J. Met.</i> , 6, pp. 393-400. |