

Lows, upper level troughs, and frontal systems. Driest conditions in the central United States occurred with the approach and passage of the mean upper ridge (figs. 8, 9).

5. TROPICAL ACTIVITY

In the tropical Atlantic, August was an uneventful month. The only hurricane, Betty, formed on August 29 near 41°N, 42.5°W, from neutercane Bravo, which was identified 5 days earlier in the fringe of the upper level westerlies at 37.5°N, 54.5°W. Its initial large-scale environment was a weakening mean upper trough dislodged from the east coast of the United States by progressive upstream waves (figs. 9, 10).

Tropical storm Carrie formed on the last day of the month off the southeastern coast of the United States in a region of very weak midtropospheric flow (fig. 11).

The Atlantic subtropical High at 700 mb was somewhat stronger than normal during August (figs. 1, 2), as was the August mean sea-level High in that area. However, sea-surface temperature analyses for the August 1–24 period (prepared by the U.S. Navy Fleet Numerical Weather Facility, Monterey, Calif.) reveal below-normal water temperatures along 15°N latitude from the African coast to 35°W. As suggested by Carlson (1971), this may have been a deterrent to the development of disturbances coming off the west coast of Africa.

In contrast to the Atlantic, the southeast North Pacific Ocean experienced five storms of hurricane intensity, plus a tropical storm at the end of the month. They were scattered throughout the month; map analyses indicated first attainment of tropical storm intensity as follows: Celeste, 8/7; Diana, 8/11; Estella, 8/16; Fernanda, 8/20; Gwen, 8/23; and Hyacinth, 8/30.

Two of the storms, Diana and Fernanda, passed just north of the Hawaiian Islands while of tropical storm intensity. They remained far enough to the north, however, that Hilo, for example, received less than normal precipitation for the month. Gwen moved northwestward to just west of lower California before dissipating at the end of the month.

The southeast North Pacific storms reached tropical storm intensity from 10° to 13°N between 100° and 121°W. This was the location in July of a tongue of warm surface water where temperatures exceeded 83°F. Furthermore, while July water temperatures were only slightly above normal in the region of subsequent tropical storm formation, they exceeded normal by 6°–8°F along the Equator from 112°W to the coast of South America (National Marine Fisheries Service 1972). This anomalous warming was apparently related to a weakening of the eastern South Pacific subtropical High and the consequent reduction of upwelling along the northwest coast of South America and in the equatorial southeast North Pacific (National Marine Fisheries Service 1972). Thus, the frequent occurrence of intense storms in the southeast region of the North Pacific during August appears related to an augmented latent heat supply which, itself, occurred in response to large-scale atmospheric circulation changes.

In addition to three tropical storms, there were two typhoons, Alice and Betty, in the western North Pacific during August. Both formed south of the strong western Pacific 700-mb High (figs. 1, 2). Alice moved east of Japan on August 7, but Betty followed a more southerly track, making landfall in eastern China on August 17.

REFERENCES

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- Environmental Data Service, NOAA, U.S. Department of Commerce, and Statistical Reporting Service, U.S. Department of Agriculture, *Weekly Weather and Crop Bulletin*, Vol. 59, Nos. 32–36, Aug. 7, 14, 21, 28 and Sept. 4, 1972.
- National Marine Fisheries Service, NOAA, U.S. Department of Commerce, *Fishing Information*, No. 7, July 1972, 16 pp.
- Taubensee, Robert E., Weather and Circulation of July 1972—Record Cold in the Northern Great Plains and Northern Rocky Mountains, *Monthly Weather Review*, Vol. 100, No. 10, Oct. 1972, pp. 751–756.

CORRECTION NOTICE

Vol. 100, No. 6, June 1972, p. 421, left col: eq (12) should read

$$m_g = \frac{\pi \times 10^6}{6} (0.4483D_r)^3 \quad (\text{g}). \quad (12)$$

Vol. 100, No. 9, Sept. 1972, p. 698, right col. line 5: the sentence is to be read "Only the central Great Basin, Southern Great Plains, and northern Maine had average temperatures substantially above normal for the week."