

Weather Enters Big Business Field of World's Armies, Navy, Trade and Farms

By WALTER A. SHEAD
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There is one thing in which the nation's farmers and our military leaders have a common stake . . . an element which can upset the most carefully laid military plans and the most meticulously planned agricultural program—the weather.

The farmers' success in planting and harvesting and American combat success in combined land-sea-air operations can come only through close observance of the scientific predictions of the weatherman. For the weather is often used as a military weapon by our military strategists, and our farmers are dependent upon the vagaries of the weather to harvest a record production, or a crop failure.

No military operation—whether it is a minor sortie by a group of fighters, a bombing mission on an enemy city, naval bombardment of a Jap island, a ground attack in China, or a large scale invasion—is never blue-printed unless latest weather information is first consulted. Success of an attack is oftentimes dependent upon clear weather, though American forces have profitably exploited bad weather to make offensive strikes against the enemy.

Our military strategists were quick to recognize the importance of accurate meteorological data, and so have greatly expanded the network of observation posts, trained thousands of officers and enlisted men and adopted new technological devices to guarantee reliable forecasts.

Together, the AAF, the navy and the U. S. Weather bureau weather systems form a vast network of information, research, observation and forecasting reaching from the United States to all parts of the world. Observation units vary in size from two men occupying a hut on an isolated Atlantic or Pacific Isle to a major research station with a full staff of specialists.

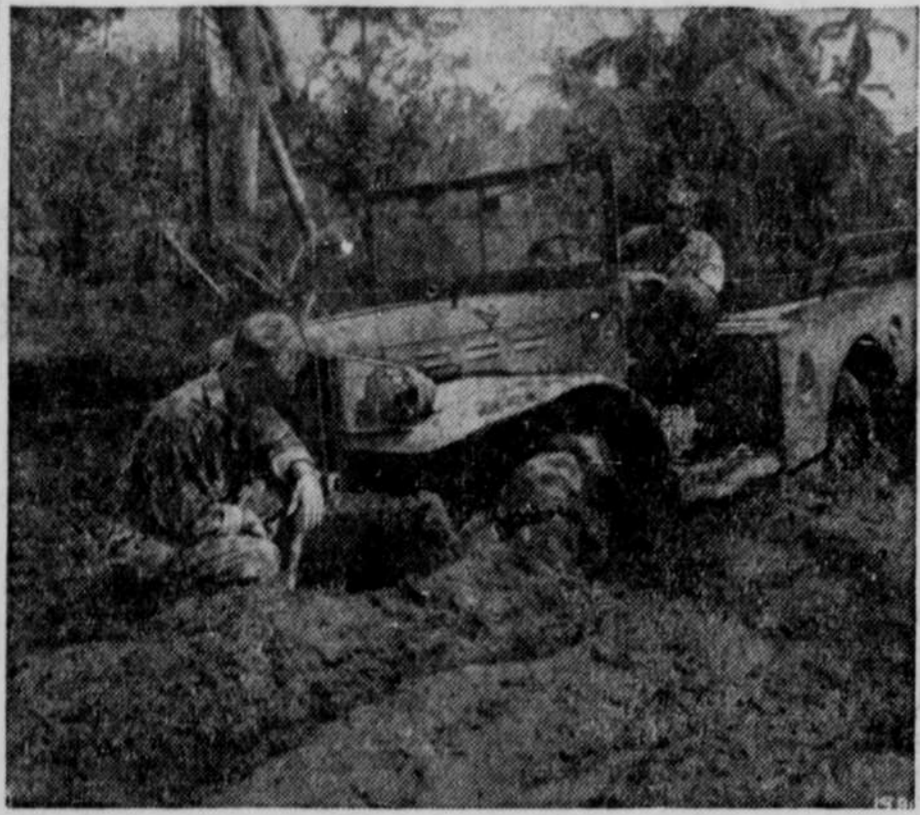
The AAF maintains several major research centers and more than 1,000 observation and forecasting stations reaching from the Arctic to the Antarctic, and its weather report system spreads and moves as rapidly as the fighting fronts. The nerve center of this vast, scattered weather force is in the Pentagon building in Washington where approximately 250 persons watch the weather in all regions of the world and prepare long-range forecasts and special studies to guide our high strategy planners.

Navy Maintains Stations.

The navy maintains about 1,400 observation and forecasting stations, including about 14 major weather "centrals." In some instances aerological units may be aboard flagships or aircraft carriers, or on advanced island bases and the units may consist of one man on a small ship or a full-fledged "central" with a full complement of 100 or more officers and men.

How the navy weather bureaus have grown since 1940 may be seen by the fact that in that year navy aerology under the bureau of aeronautics consisted of less than 200 officers and men in about 50 units, whereas today the personnel totals about 6,500 officers and men assigned to the 1,400 units. The AAF staff of weather specialists numbers 20,000 officers and men, and the force of observers alone has grown from 50 to 10,000.

Service provided by these thousands of forecasters in-



This photo shows the effect of weather on the soil on a south Pacific island. This truck is really mired.

cludes technical operation and interpretation of results recorded by radio-sonde, a small box containing a single-tube short wave transmitter. Sent aloft on a balloon, the transmitter gives temperature and humidity readings at various heights. There are also repair technicians schooled in the maintenance of delicate weather instruments, communications men who radio or teletype weather reports back to headquarters, and aircraft weather reconnaissance fliers, who observe conditions along the flying routes.

According to the Office of War Information, the AAF and the navy weather forces have been made possible by the careful selection of men from the ranks to specialize in weather information, by intensive



Germany took advantage of bad, overcast weather, with rain and snow to make their counter-attack in the Belgian bulge in the Ardennes. Low visibility and cold kept our superior airforce grounded, until clearing weather gave us a break.

station training and by releasing personnel from the weather bureau for military duty and replacing them by new civilian recruits.

Weather Important Weapon.

According to our military men accurate evaluation of weather, plus the constant flow of up-to-the-minute meteorological information from all theaters of war, make it possible to use weather as an important weapon. Cited as examples of weather strategy is the Sicilian invasion. Plotting of prevailing winds and of the movement of cold air front over Italy indicated our invasion ships



Excessive rain has caused a landslide on a military road somewhere on the Italian front.

From Arctic to Antarctic Vast Army of Weather Experts

Combined military operations plans are contingent on ideal weather conditions for all four participating combat sections: air, ground, sea and amphibious. Weather plans for air operations must include pre-invasion conditions for softening up as well as air support on the invasion day. Ground conditions will include soil trafficability, whether or not soil will support movement of heavy vehicular equipment, air stability and wind velocity, for use of

chemical warfare, smokescreens, etc. Sea conditions must be favorable enough to permit the large ships to launch small craft with safety and amphibious commanders are concerned with on-shore and off-shore winds and surf conditions. So the weatherman's task is to discover conditions which will be most nearly ideal for all four operations and how many days such conditions will prevail. Plans can then be made accordingly.

would encounter rough seas on the journey from North Africa. But at the same time our forecasters predicted tranquil waters in Sicilian harbors, and the almost miraculous calming of the seas as our landing craft neared the Sicilian shores was a military classic.

Admiral Halsey took advantage of the cover of a "zero-zero" storm after raiding the Marshall and Gilbert Islands. With visibility zero and ceiling zero, his ships, large and heavy enough to ride out the storm, were meanwhile safe from enemy air attack.

At Rabaul detail plotting of the upper air strata enabled our forces to lay down a smoke screen to blot out our vessels and our planes from Japanese ack-ack and dive bombers. Low wind velocity was required so that our screen would not suddenly veer and cover our target instead. Conditions were exactly as predicted and ordered.

Many other instances of the use of weather forecasts by our militarists are given, for instance in the Normandy invasion, weather was bad and the sea choppy, but the forecasts were that severe conditions would prevail for at least 21 days after the D-Day chosen.

Axis Are Weather Conscious.

Both Germany and Japan are extremely weather conscious and both have used weather, particularly bad weather, to screen their activities. For instance, Germany's battle of the bulge in the Ardennes was undoubtedly arranged to coincide with bad weather that would keep our superior air strength incapable of decisive blows, while German ground forces, numerically stronger at that point, smashed through. A clearing break in the weather came ultimately and our air power went into action to help stop the German offensive.

According to the navy, the Japs are not as far advanced in weather technique as either Germany or our own military. In at least one instance a Japanese plan of action did not work out as scheduled because of their weather miscalculations. They attempted to bring reinforcements to New Guinea under a storm front so that our planes could not spot their movements. An unexpected or miscalculated shift dissipated the storm front. The troop and supply armada was spotted by our reconnaissance planes. They were attacked and destroyed by the AAF in the famous Battle of the Bismarck Sea.

Methods used by various countries in weather forecasting vary. The AAF and the navy use the Norwegian theory of air masses and polar fronts and the long series of daily weather charts of the world prepared by the weather bureau as a basis.

Research Essential.

Almost endless research was necessary to code the world's weather data. Starting in 1942 the weather bureau, in cooperation with the military services, started in this task using all available weather information in the northern hemisphere for each day since 1899. This information was replotted and reanalyzed, transferred into a standard code and into a punch card system. In this way 30 years of weather were charted and analyzed within a year. From the areas studied by the army, high priority sections, where military action would most likely take place, a similar card system was evolved and total weather tabulations to date cover about 55 million cards. At present about 500,000 cards are recorded each month.

Work for the United States

By comparing the current day's maps with the finger-print maps, chosen by weather experts from those maps indicated by the card-machine selection, the past weather most nearly like that of May 15, 1945, is chosen. It may have been February 23, 1929. With this map and the map for the succeeding days in 1929, the weather expert can see how the high and low pressure groups moved, can study other meteorological data

Gorgeous New Prints in Exotic Scenic Designs and Coloring

By CHERIE NICHOLAS



IF YOU like pretty clothes that carry an air of style distinction, don't let the summer get by without giving yourself the joy of including in your dress collection a simple little gown made of one of the gorgeous new scenic prints. You will find that it will become your pet frock no matter how many other lovely dresses you own, for these tropical-looking flamboyant prints are simply devastating in their flattery.

The prints themselves are so eye-thrilling you wouldn't think of making them up other than very simply in order to "show off" their unique patterning of true native scenes or such lighthearted themes as gay troubadours and dancing girls. These California prints fairly breathe sunshine and outdoor happiness.

For instance, one of this series of scenic prints depicts the famous California missions done in lavish sunshine colors. See it made up in the charming gown shown to the right in the illustration. A prettier dress for summer you couldn't find, and it will radiate the spirit of sunshine wherever it goes.

The dancing girl is the print motif of the other gown, who fascinates you with her grace and charm. Note the off-shoulder decolletage outlined with a double bertha collar done in two tones, the light matching the gold in this fantasy print. It also appears in the front skirt-opening trim.

Another dramatic print in this series takes an Indian war bonnet for its motif. The headdress, while not life size, is really quite large. With its bright feathers the effect is strikingly colorful and the placement of the bonnet motifs in an all-over patterning is most artful.

Another adorable print that has feminine charm plus is a shan-

tung patterned with exquisitely colorful bow-knots that are so huge one of them would cover the entire bodice front. This makes up very attractively in a hostess gown and also is making appeal with the young set, for the costume that has a dirndl skirt worn with a monotone contrast blouse. It is a print that yields stunning cutouts to apply as is now being done, one bow-knot on the bodice and one on a strategic point on the skirt of a plain colored dress.

For beach wear and play suits a most individual looking border print is shown in the season's better collections, which is well worth looking up by the girl who makes her own clothes. It is a white spun rayon weave, the wide border showing Egyptian figures trekking along in picturesque and richly colorful garb. It has an oriental air about it that is fascinating. A very attractive bra-top bathing ensemble of this novel print fashions the skirt of the wide border. A separate long-belted coat uses the material so that the border with its quaint figures forms the wide hemline.

A fashion that has high style prestige is that of the town suit made of gay print. Designers are turning out stunning suit types, some of modest patterning and coloring, for practical utilitarian wear, others of prints so dramatic and colorful they tune most beautifully to daytime social affairs. Once you own a print suit you'll love it. Not only is it perfect for summer wear, but you'll appreciate its flattery. Some are given a dressy look with glittering jeweled buttons, and they all take on all the latest "tricks" in way of bows and scalloped edges and pretty dainty lingerie accents.

Released by Western Newspaper Union.

White Mandarin Coat



This striking mandarin coat is in the new white wine shade—an off-white which everybody adores. It's coats like this which are "stealing the show" this season. A coat of light weight, as shown here, is in a lovely pastel tint, short and youthful in line, reaches the ultimate in high styling.

Shell Jewelry Adds Rare Beauty to Mode

Summer costume jewelry made of tropical shells brings new beauty into the current fashion picture. The shells from Tahiti are expertly hand-processed in this country. These Pikaki shells are quite diminutive, being less than quarter-inch size. Other exotic shells run to three-quarter inch. Drilled, strung, tinted and pearlized by hand, the jewelry is available in every pastel and tropical hue, also pearlized white shells. Necklaces are shown in choker and lei lengths, made up from one to six strands. They come with earrings to match. One ensemble of bracelets is so contrived that with the use of open lucite links the two can be joined to form a longer length necklace to wear lei fashion. A twisted choker of the tinier shells with a grosgrain tie is another intriguing fancy. Coiffure combs match up with any of the ensembles.

Washable Cottons For Girls' Dresses

Washable piques, checks, stripes and handsome ginghams are suggested for teen-age summer fashions. These are highlighted with eyelet embroidery and other lingerie touches, especially embroidery beading that is threaded with narrow black velvet ribbon. One charming way of using eyelet embroidery is to work it into cap sleeves for a simply styled gingham. This deft touch is the only trimming and the effect is charming.

Sunny-Day Set For Little Girl



AN ADORABLE out-of-doors outfit for a sweet little girl. A sun bonnet to shade her face—little wing sleeves to keep her cool—it's an ensemble that she'll love to wear on sunny days.

Pattern No. 1331 is designed for sizes 2, 3, 4, 5 and 6 years. Size 3, dress, requires 1 1/2 yards of 35 or 39 inch material; bonnet, 1/2 yard; 5 yards edging or ric rac to trim dress and bonnet.

Due to an unusually large demand and current war conditions, slightly more time is required in filling orders for a few of the most popular pattern numbers.

Send your order to:

SEWING CIRCLE PATTERN DEPT.
330 South Wells St. Chicago
Enclose 25 cents in coins for each pattern desired.
Pattern No. Size
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HEARTBURN

Relieved in 5 minutes or double money back
When excess stomach acid causes painful, suffocating gas, sour stomach and heartburn, doctors usually prescribe the fastest-acting medicine known for symptomatic relief—medicines like those in Bell-sana Tablets. No laxative. Bell-sana brings comfort in a jiffy or double your money back on return of bottle to us. See at all druggists.



SNAPPY FACTS

about RUBBER



It is difficult to detect the ordinary "slow leak" in time to prevent destructive "roadside flats." The Office of Defense Transportation recommends an effective cure for stealthy leaks: (1) Make sure valve caps have been screwed on finger tight. (2) Before adding air be sure to test pressure in each tire. (3) Check variations in tire pressure—a marked difference in pressure indicates a slow leak, which should be repaired immediately.

To help relieve the critical need for military tires, men who work in a large rubber plant in Los Angeles (B. F. Goodrich) have sworn not to miss a day's work, and, like submarine crews, not to shave for 120 days.

B. F. Goodrich

In war or peace



FOR QUICK RELIEF FROM
SPRAINS AND STRAINS
Muscular Aches and Pains • Stiff Joints • Bruises
What you NEED is
SLOAN'S LINIMENT



"I understand back home they're saying the war is over."

"Speak louder—I can't hear yuh."

Sure, Bill—speak louder. Celebrate louder, America!

You'll have to, to be heard above the bloody gurgles of the men who are dying at this very moment of our day of "Victory" . . . the ghostly whispers, mighty in volume, of the men who died not to kill one nation but to kill all tyranny.

Today our great fight is but half won. Japan, our final and most dangerous enemy, still lives. Japan still boasts an army of 4,000,000 fanatical, last-ditch fighters, with half again that many in reserve. Japan's huge, ill-gotten wealth of Empire is still essentially intact.

Japan still hates our guts. Today we can, if we choose, start breaking faith with those who died. We can go on a fool's orgy, get drunk on our success so far.

Or we can, if we choose, pray for our dead, and for the lives of those who have so far been spared. We can stay on the job, buy another War Bond, give a pint of blood. We can choke back our cheers . . . and save our wind for the mighty task that lies ahead.

Today is but the symbol of the many days to come.

What are you going to do with these days?

Prepared by the War Advertising Council