

FUNK &
WAGNALLS
Standard Reference
ENCYCLOPEDIA

18
101

NEW
SERIES

FUNK & WAGNALLS

Standard REFERENCE

REGISTERED UNITED STATES PATENT OFFICE

ENCYCLOPEDIA



VOLUME 18

NEVADA—OZONE

JOSEPH LAFFAN MORSE, SC.B., LL.B., L.H.D., LL.D.
Editor in Chief

FUNK & WAGNALLS
STANDARD REFERENCE ENCYCLOPEDIA
© 1959, 1960, 1961, 1962, 1963, 1964, 1965 and 1966
By **WILFRED FUNK, INC.**

UNIVERSAL STANDARD ENCYCLOPEDIA
© 1956, 1957 and 1958
By **WILFRED FUNK, INC.**
Copyright 1954 and 1955
By **WILFRED FUNK, INC.**

NEW FUNK & WAGNALLS ENCYCLOPEDIA
Copyright 1950, 1951, 1952 and 1953
By **WILFRED FUNK, INC.**

FUNK & WAGNALLS NEW STANDARD ENCYCLOPEDIA
Copyright 1931, 1934, 1935, 1937 and 1943
By **WILFRED FUNK, INC.**

Printed in the United States of America
ALL RIGHTS RESERVED

**Copyright Under the Articles of the Copyright Convention
of the Pan-American Republics and the United States**

GFF

Frontispiece photo credits: Top, Martin
Helfer from Shostal; Bottom left, A. De-
vaney, Inc.; Bottom right, Ewing Galloway.

FUNK & WAGNALLS
STANDARD REFERENCE
ENCYCLOPEDIA

LIST OF ABBREVIATIONS USED IN THE TEXT

abbr.	abbreviated	Gael.	Gaelic	OHG.	Old High German
a-c	alternating current	gal.	gallon	ON.	Old Norse
A.D.	Anno Domini	Gen.	General	ONF.	Old Norman
agg.	agglomeration	Ger.	German		French
alt.	altitude	Gr.	Greek	O.T.	Old Testament
A.M.	ante meridiem	Heb.	Hebrew	oz.	ounce
anc.	ancient	Hind.	Hindustani	Phil.	Philippine
Ar.	Arabic	Hon.	Honorable	P.M.	post meridiem
AS.	Anglo-Saxon	h.p.	horsepower	Pol.	Polish
A.S.S.R.	Autonomous Soviet Socialist Republic	hr.	hour	pop.	population
at.no.	atomic number	Hung.	Hungarian	Port.	Portuguese
at.wt.	atomic weight	I.	Island	prelim.	preliminary
b.	born	i.e.	that is	pron.	pronounced
B.C.	before Christ	in.	inch	q.v.	which see
bev	billion electron volts	Ind.	Indian	r.	reigned
b.p.	boiling point	Ir.	Irish	R.	River
B.T.U.	British Thermal Unit	It.	Italian	rev.	revised, revision
bu.	bushel	Jr.	junior	Rev.	Reverend
Bulg.	Bulgarian	K.	Kelvin	Rum.	Rumanian
C.	centigrade	kg	kilogram	Russ.	Russian
cent.	century	km	kilometer	S.	south; southerly; southern
Chin.	Chinese	lat.	latitude	sec.	second
cm	centimeter	Lat.	Latin	Skr.	Sanskrit
Co.	County	lb.	pound	Sp.	Spanish
colloq.	colloquial	lit.	literally	sp.gr.	specific gravity
cu.	cubic	long.	longitude	sq.	square
Czech.	Czechoslovakian	m	meter	S.S.R.	Soviet Socialist Republic
d.	died	m.	mile	Sum.	Sumerian
Dan.	Danish	M.	Middle	Sw.	Swedish
d-c	direct current	mev	million electron volts	temp.	temperature
Du.	Dutch	mg	milligram	trans.	translation, translated
E.	east; easterly; eastern	min.	minute	Turk.	Turkish
ed.	edition	M.L.	Medieval Latin	U.K.	United Kingdom
e.g.	for example	mm	millimeter	U.N.	United Nations
Egypt.	Egyptian	mod.	modern	U.S.	United States
Eng.	English	m.p.	melting point	U.S.A.	United States of America
est.	estimated	M.P.	Member of Parliament	U.S.S.R.	Union of Soviet Socialist Republics
et seq.	and following	m.p.h.	miles per hour	var.	variety
ev	electron volt	Mt.	Mount, Mountain	W.	west; westerly; western
F.	Fahrenheit	N.	north; northerly; northern	yd.	yard
fl.	flourished	N.T.	New Testament		
fr.	from	OE.	Old English		
Fr.	French	OF.	Old French		
ft.	foot				
g	gram				

Note.—The official abbreviations for the States of the Union are used throughout. For academic degrees, see article DEGREE, ACADEMIC. For additional abbreviations of units of measure, see article WEIGHTS AND MEASURES. Some abbreviations which are self-explanatory have been omitted.

FUNK & WAGNALLS

STANDARD REFERENCE ENCYCLOPEDIA

NEVADA, one of the Mountain States of the United States, bounded on the n. by Oregon and Idaho, on the e. by Utah and Arizona, on the s. by Arizona, and on the s.w. and w. by California.

Area (7th State in rank)	110,540 sq.m.
Land	109,789 sq.m.
Inland water	751 sq.m.
Population (49th in rank)	(1960) 285,278
	(1950) 160,083
	(1940) 110,247
Altitude	470 ft. to 13,145 ft.
Capital	Carson City (1960) 5163
Largest city	Las Vegas (1960) 64,405
Entered Union (36th State)	Oct. 31, 1864
Nicknames	Sagebrush State; Silver State
Motto	All for Our Country
Song	"Home Means Nevada"
Tree	aspen *
Flower	sagebrush
Bird	mountain bluebird *

* Not official

In the order of population (1960) the chief cities are Las Vegas and Reno (qq.v.).

Physical Characteristics. Nevada, chiefly a plateau, lies almost wholly within the Great Basin. The Great Basin region extends well into Utah; it is hemmed in on the w. by the Sierra Nevada Mts., and on the e. by the Wasatch and lesser mountains. Numerous mountain ranges from 7000 to 10,000 ft. above sea level and up to 100 m. in length divide the State into a series of elongated parallel valleys extending from n. to s. The highest point is Boundary Peak (13,145 ft. above sea level) in the s.w. portion of the State; the lowest point is in the s.e. and is 470 ft. above sea level. The average elevation of Nevada is 5500 ft.

The chief rivers are the Humboldt, which rises in Elko Co. in the n.e. and flows w. to Humboldt Lake; the Colorado, which forms the s.e. boundary of the State; and the Walker, Carson, and Truckee rivers, which rise in the Sierra Nevadas and flow e. to Walker Lake, Carson Lake, and Pyramid Lake, respectively.

Climate. The dominant features of the climate are the low relative humidity and the large daily range in temperature. The rapid radiation, due to the dry air, cloudless skies, and high altitude, make the nights cool. The average temperature during January is 28° F.; during July, 71.9° F. Extremes of 110° F. and -22° F. have been recorded. The average annual precipitation is low, 8.54 inches, and

varies from 3 inches in the s.w. corner of the State to 12 inches in the e.

Plants and Animals. The most prevalent plants in s. Nevada are the creosote bush, Joshua tree, yucca, and cactus; in the n. desert regions the sagebrush is the most common plant. The squaw apple, bluebell, geranium, flowering peach, iris, violet, and larkspur also are found in the State. Trees include the sugar pine, lodgepole pine, white-barked pine, willow, alder, and mountain hemlock.

The smaller forms of wildlife found in Nevada include the beaver, badger, skunk, coyote, red fox, muskrat, bobcat, mink, weasel, marmot, and porcupine; the larger forms are the mountain lion, mule deer, pronghorn, and bear. The mockingbird, thrush, jay, horned lark, Nevada creeper, and bluebird are distinctive members of the avifauna. Game birds include the pheasant, partridge, and sage grouse. The streams and lakes of the State are populated by about 55 species of fish, including carp, bass, and Mackinaw, silver, and rainbow trout.

Points of Interest. The Federal government owns 87 percent of the Nevada lands, the largest percentage in any State. More than 115,000 acres of the Death Valley National Monument (q.v.) are situated in Nevada, and Lehman Caves National Monument, embracing 640 acres, is located entirely within the State. Lake Mead National Recreation Area occupies about 1,936,978 acres of the State. National forest land totals 5,375,000 acres, and about 1,141,000 acres have been assigned to Indian tribes (Indian pop. in 1960, 6681) by the Office of Indian Affairs.

The Economy. Nevada is rich in mineral resources. The most important minerals produced in Nevada are copper, zinc, gold, sand and gravel, lead, gypsum, and stone. Silver, uranium, magnesite, vanadium, tungsten, antimony, platinum, cobalt, and nickel also are mined. Nevada ranked thirty-first in the nation in mineral production in the year 1962; the total value was approximately \$83,733,000.

Agriculture rivals mining in economic importance. There are more than 3000 farms covering an area of some 8,200,000 acres in Nevada. The average farm is about 2880 acres in extent. Tenants operate about 7 per-



Bettmann Archive

Tunneling operations in a silver mine in Nevada in the 1870's. Miners worked entirely with pickaxes and other hand tools.

cent of the farms. The chief crops are hay, barley, alfalfa, wheat, potatoes, sugar beets, orchard fruits, and vegetables. In the semi-tropical s. portion of Nevada figs, grapes, almonds, and pomegranates are grown.

Livestock raising is the principal source of agricultural income in Nevada. In the early 1960's the livestock population numbered 526,000 cattle (including 17,000 dairy cows), 304,000 sheep, 20,000 horses and mules, and 9000 hogs. Cash receipts from farm products in the early 1960's totaled annually about \$45,500,000, including about \$38,500,000 from livestock.

Nevada is one of the least important States in the Union in manufacturing. The chief industries of the State are food processing, lumbering and production of forestry products, smelting, refining, and the manufacture of chemicals and allied products. Such enterprises as the production of stone, clay, and glass products, furniture, soaps, and gypsum and gypsum products also are important to the economy of the State. The manufacture of defense equipment is a growing industry. The value added by manufacture in the year 1962 totaled about \$99,000,000.

The State attracts numerous tourists, vacationists, and persons seeking divorce. In 1931 the legislature passed a divorce law requiring a minimum stay of six weeks to establish residency. Gambling has been legalized, and the State receives 2 percent of the receipts of each gaming table.

The Southern Pacific, Union Pacific, and Western Pacific railroads cross Nevada from E. to W. and provide more than 1646 m. of main-track railway. The State highway system comprises 4000 m. of roads.

Education. Attendance at the public schools of Nevada is free and compulsory

during the entire school year for all children between the ages of seven and eighteen. In the mid-1960's there were approximately 53,800 pupils enrolled in public elementary schools, which had about 2100 teachers; in public secondary schools there were more than 28,700 pupils and more than 1200 teachers. There were more than 4750 additional pupils in private schools. The University of Nevada, in Reno, a State-supported school, is the only institution of higher learning in Nevada (see NEVADA, UNIVERSITY OF).

Government. Nevada is governed according to the constitution of 1864, as amended. Executive authority is vested in a governor, lieutenant governor, secretary of state, attorney general, controller, treasurer, inspector of mines, and surveyor general, all elected for four-year terms. The legislature is composed of a senate of 17 members elected for four-year terms (half every two years) and an assembly of 47 members elected for two-year terms. The judiciary is composed of a supreme court consisting of a chief justice and 2 associates who are elected for six-year terms, 8 district courts, and justices of the peace. The State is divided into 17 counties. Nevada sends 2 senators and 1 representative to Congress.

History. The first European known to have entered the region of Nevada was Francisco Garcés, a Franciscan friar, in 1775. In 1825 Peter S. Ogden, an employee of the Hudson's Bay Company, crossed the territory and reached the Humboldt R. Other trappers fol-

Modern gold mining in Nevada employs power machinery. Mineral deposits have provided a principal source of income for the State.

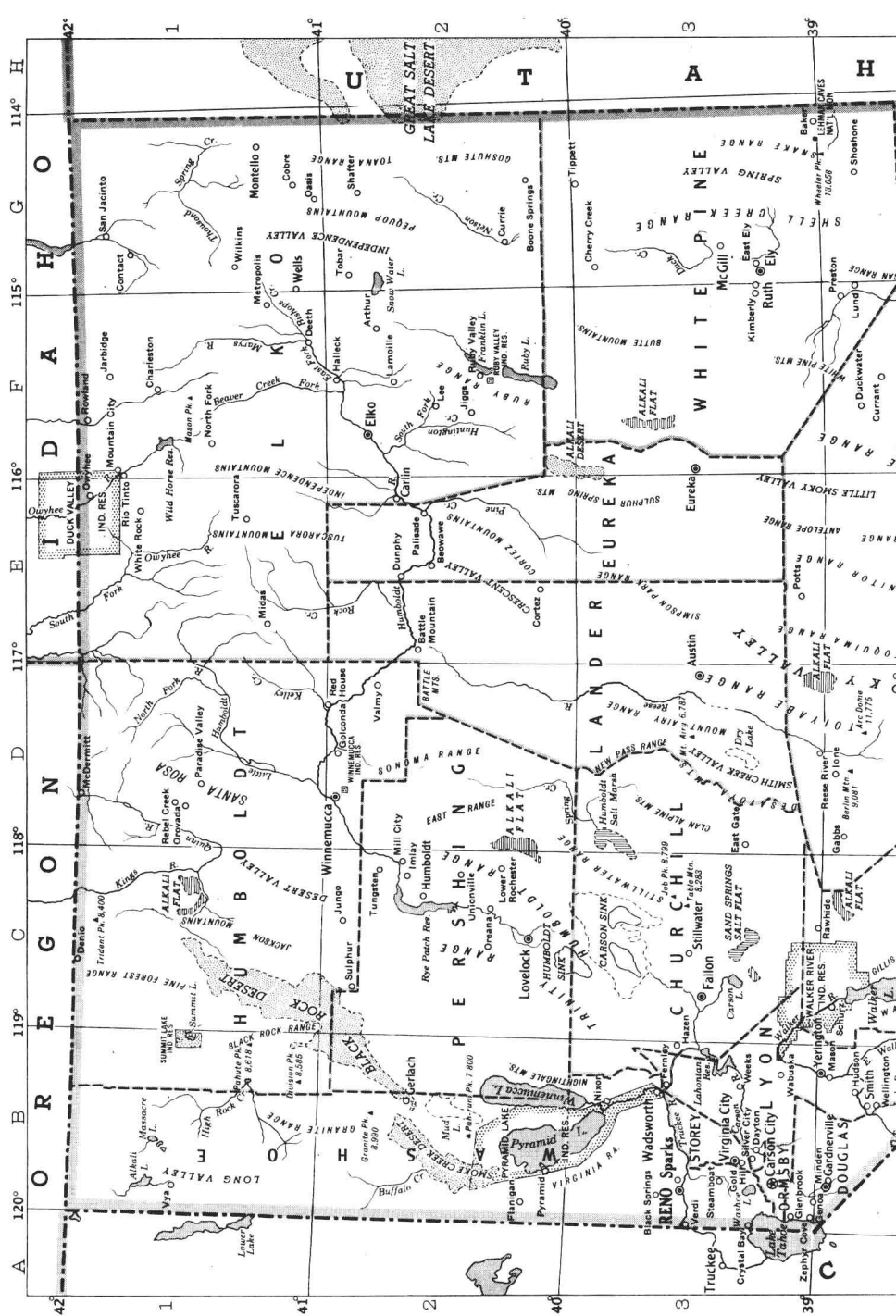
Ward Allan Howe



Adavén	F 4	Charleston (peak)	F 6	Excelsior (mts.)	C 4	Humboldt (mt. range)	C 2	Manhattan	E 4	Owyhee (riv.)	E 1
Airy (mt.)	D 3	Cherry Creek	G 3	Fallon	C 3	Humboldt (riv.)	E 2	Marys (riv.)	F 1	Pah-rum (peak)	B 2
Alamo	F 5	Clan Alpine (mts.)	D 4	Fernley	B 3	Humboldt (salt marsh)	C 2	Mason (peak)	F 1	Pahrnagat (mt. range)	F 5
Antelope (mt. range)	E 4	Coaldale	D 4	Flanigan	B 2	Humboldt (sink)	D 3	Mason (peak)	F 1	Pahrnagat (mt. range)	F 5
Arc Dome (mt.)	D 4	Cobre	G 1	Fort Mohave Ind.	G 7	Humboldt (sink)	D 3	Mc Dermitt	D 1	Pahrnagat (val.)	E 6
Arden	F 6	Colorado (riv.)	G 7	Res.	F 2	Huntington (creek)	C 2	Mc Gill	G 3	Pahrnagat (peak)	E 5
Arrow Canyon	G 6	Columbus (salt marsh)	C 4	Franklin (lake)	F 6	Inlay	C 2	Mead (lake)	G 6	Pahrnagat (peak)	E 5
Arthur	G 6	Contract	G 1	Gabbis	D 4	Independence (mts.)	E 2	Meadow Valley (mt. range)	G 5	Pahrnagat (peak)	E 5
Austin	F 2	Cortez (mts.)	E 2	Genoa	B 4	Independence (val.)	G 2	Meadow Valley	G 5	Pahrnagat (peak)	E 5
Babbitt	E 3	Crescent (val.)	E 2	Genoa	B 4	Indian Springs	G 2	Mesa	G 5	Pahrnagat (peak)	E 5
Baker	C 4	Cristal Bay	A 3	Gillis	B 2	Ione	F 6	Mesquite	G 6	Pahrnagat (peak)	E 5
Battle (mts.)	G 3	Current	E 2	Glenbrook	B 3	Jackson (mts.)	D 4	Metropolis	G 1	Pahrnagat (peak)	E 5
Battle Mountain	E 2	Currie	G 2	Glenbrook	B 3	Jackson (mts.)	D 4	Metropolis	G 1	Pahrnagat (peak)	E 5
Beatty	E 6	Davis (dam)	G 2	Glenbrook	B 3	Jackson (mts.)	D 4	Metropolis	G 1	Pahrnagat (peak)	E 5
Beaver Creek Fork	E 6	Dayton	G 2	Glenbrook	B 3	Jackson (mts.)	D 4	Metropolis	G 1	Pahrnagat (peak)	E 5
Belted (mt. range)	F 1	Death Valley Nat'l Mon.	E 6	Golden Gate (mt. range)	D 5	Jacks	F 7	Mill City	D 2	Pahrnagat (peak)	E 5
Beowawe	E 2	Deeth	F 1	Golden Gate (mt. range)	D 5	Jacks	F 7	Mill City	D 2	Pahrnagat (peak)	E 5
Berlin (mt.)	E 2	Denio	F 1	Goldfield	F 5	Kawich (mt. range)	E 2	Miner	C 4	Pahrnagat (peak)	E 5
Big Smoky (val.)	D 4	Desert (mt. range)	F 6	Goodspings	D 5	Kawich (peak)	E 2	Miner	C 4	Pahrnagat (peak)	E 5
Bishops (creek)	F 1	Desert (val.)	F 6	Goshute (mts.)	G 2	Kelley (creek)	E 2	Monitor (mt. range)	E 4	Pahrnagat (peak)	E 5
Black Rock (des.)	C 2	Division (peak)	B 1	Goshute (mts.)	G 2	Kimberly	F 3	Monte Cristo (mt. range)	D 4	Pahrnagat (peak)	E 5
Black Rock (mt. range)	B 1	Dry (lake)	D 3	Granite (peak)	B 2	Kings (river)	F 3	Montello	G 1	Pahrnagat (peak)	E 5
Black Springs	B 3	Dry Lake	G 6	Granite (peak)	B 2	Lahontan (res.)	B 3	Mormon (mt. range)	G 5	Pahrnagat (peak)	E 5
Boone Springs	F 6	Duck Creek	G 3	Grant (mt. range)	F 4	Lamoille	F 2	Mount Airy (mt. range)	D 3	Pahrnagat (peak)	E 5
Boulder City	G 2	Duck Valley Ind.	G 3	Great Salt Lake	H 2	Las Vegas	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Boundary (peak)	C 5	Duckwater	E 1	Halleck	C 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Bristol Silver	G 4	Dunphy	F 4	Hawthorne	C 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Bunkerville	G 6	Dyer	C 2	Hawthorne Nav.	C 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Butte (mts.)	F 3	East (mt. range)	D 2	Hazen	C 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Cactus (mt. range)	E 5	East Gate	D 3	Hazen	C 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Caliente	G 5	Egan (mt. range)	B 4	Henderson	C 3	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Carlin	E 2	Elgin	G 4	Highland (peak)	G 5	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Carp	C 3	Elko	F 2	Hiko	F 5	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Carson (lake)	B 3	Ely	G 3	Hoover (dam)	G 7	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Carson (riv.)	B 3	Ely	G 3	Hot Creek (mt. range)	E 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Carson (sink)	C 3	Ely (mt.)	G 4	Hot Creek (mt. range)	E 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Carson CITY	C 3	Ely (mt.)	G 4	Hot Creek (val.)	E 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Cedar (mt.)	D 4	Emigrant (peak)	C 5	Hudson	B 4	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5
Charleston	F 1	Eureka	E 3	Humboldt	C 2	Las Vegas Bomb.	F 6	Mt. Montgomery	C 5	Pahrnagat (peak)	E 5

County Seat

Continued on page 6438

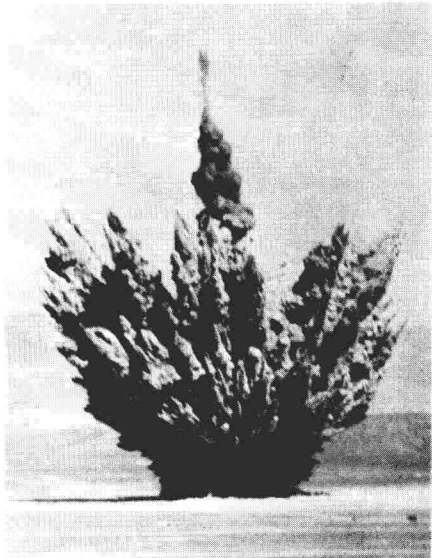


Round Mountain	E 4	Shell Creek (mt. range)	G 3	Specter (mt. range)	E 6	Thousand Spring (creek)	G 1	Tuscarora (mts.)	E 1	Weeks	B 3
Rowland	F 1	Shoshone	G 4	Spotted (mt. range)	F 6	Timber (mt.)	E 5	Unionville	C 2	Wellington	B 4
Rox	G 6	Shoshone (mt.)	E 6	Spring (creek)	D 2	Timber (mt.)	F 4	Ursine	G 5	Wells	G 1
Ruby (lake)	F 2	Silver City	B 3	Spring (mts.)	F 6	Timbapute	F 4	Valmy	D 2	Wheeler (peak)	G 4
Ruby (mt. range)	F 2	Silver Peak (mt. range)	D 5	Spring (val.)	G 3	Tippett	F 5	Verdi	B 3	White Pine (mts.)	F 3
Ruby Valley	F 2	Silver Peak (mt. range)	D 5	Steamboat	B 3	Tippett (mt. range)	F 5	Virgin (mts.)	G 6	White Rock	E 1
Ruby Valley Ind.	F 2	Silver Peak (mt. range)	D 5	Stillwater	C 3	Tobara	G 3	Virgin (peak)	G 6	Whitney	E 1
Res.	F 2	Simpson Park (mt. range)	E 3	Stillwater (mt. range)	C 3	Tobara (mt. range)	G 2	Virginia (mt. range)	B 3	Wild Horse (res.)	E 1
Ruth Patch (res.)	C 2	Sloan	F 7	Sulphur	C 2	Toyabeh	D 4	Virginia City	B 3	Wilkins	G 1
San Jacinto	G 1	Smith	B 4	Sulphur Spring (mts.)	C 2	Topaz Lake (res.)	D 4	Wabaska	B 1	Winnemucca (lake)	B 2
Sand Springs (salt deposit)	C 3	Smith Creek (val.)	D 3	Summit Lake	E 3	Toquima (mt. range)	B 4	Wadsworth	B 3	Winnemucca	D 2
Santa Rosa (mts.)	D 1	Smoke Creek (des.)	B 2	Summit Lake (lake)	C 1	Trident (peak)	E 4	Walker (lake)	C 4	Yerington	D 2
Schurz	C 4	Snake (mt. range)	G 3	Summit Lake (lake)	B 1	Trinity (mt. range)	C 1	Walker (riv.)	C 3	Zephyr Cove	B 4
Searchlight	F 7	Snow Water (lake)	G 2	Table (mt.)	C 3	Tungsten (riv.)	B 3	Walker River	C 4		A 3
Shafter	G 2	Sonoma (mt. range)	D 2	Tahoe (lake)	A 3	Tuscarora	E 1	Ind. Res.	C 4		
Sheep (mt. range)	F 6	Sparks	B 3					Washoe (lake)	B 3		
								Wassuk (mt. range)	C 4		

●County Seat

lowed, though they were constantly harassed by Indians. On Feb. 2, 1848, at the close of the Mexican War (see MEXICO: History) the territory from which Nevada was formed was acquired from Mexico by the U.S. in the Treaty of Guadalupe Hidalgo. In 1849 the Mormons (q.v.) founded a trading post in the Carson R. valley near the present site of Genoa. Most of Nevada was included in the Territory of Utah when the latter was formed on Sept. 9, 1850. In 1853 and 1856, the inhabitants of the Carson valley petitioned the Federal government for annexation to California, claiming that the government of Utah was lax in its protection of the settlers.

Until this time, Nevada had been merely a region that gold-seekers passed through on their way to California, but with the discovery of gold at the Comstock lode (q.v.) in 1859, many persons flocked to the area. Nevada became a Territory on March 2, 1861; its eastern border was the 116th meridian. On July 14, 1862, the E. boundary was extended to the 115th meridian, and in 1866 the State achieved its present boundaries. On Oct. 31, 1864, Nevada became a State, joining California and Oregon in being the only States w. of Kansas in this period.



Atomic Energy Commission
Sub-surface atomic explosion is set off on the Nevada desert proving grounds. The Atomic Energy Commission maintains a test site northwest of Las Vegas.



Las Vegas News Bureau

Las Vegas, largest city in Nevada, attracts thousands of tourists to its gambling casinos.

The first transcontinental telegram was dispatched from Nevada to Washington, D.C., in 1864; the message affirmed the loyalty of the State to the Union. In 1879 the Sutro Tunnel, designed to drain the Comstock Lode, was completed. In this period mining camps existed at Eureka, Hamilton, Aurora, Treasure City, Belmont, and Virginia City. Silver was the chief mineral mined, and when the price of silver fell in 1873 the State suffered a depression which lasted until 1900.

Farming and livestock raising aided the economic recovery of the State. It was discovered that the soil of Nevada was exceedingly fertile when irrigated. The United States Reclamation Act, passed in 1902, was designed to aid in the building of canals and drainage ditches in such States as Nevada. The Truckee-Carson project, which cost \$7,000,000, was the first Federal project constructed in Nevada under the Act. In 1936 the Hoover Dam was completed.

The majority of the people in the State voted for the Republican Presidential candidate in 1872, 1876, 1884, 1888, 1920, and 1928. In 1912 and 1924 third parties polled large votes, but a plurality of the ballots cast was for the Democratic Presidential candidate in the former year and the Republican Presidential candidate in the latter year. The Democratic Party candidates have received the ma-

jority of votes in all subsequent elections except in 1892, when the majority of the ballots cast was for the People's Party candidate, James Baird Weaver, and in 1952 and 1956, when the Republican candidate, Dwight D. Eisenhower, won a majority of votes in the State. In 1964 the Democratic Presidential candidate, Lyndon B. Johnson, received 79,339 votes; the Republican candidate, Barry Goldwater, received 56,094 votes.

NEVADA, UNIVERSITY OF, a coeducational, State-controlled institution of higher learning, founded as a secondary school at Elko, Nev., in 1874, and established as a university at Reno, Nev., in 1886. There is a branch campus in Las Vegas and off-campus centers in Elko and Ely. The University of Nevada is the only institution offering university-level courses in the State. Courses leading to the baccalaureate degree are offered in seventy-four major fields of study through thirty-six academic departments comprising the colleges and schools of agriculture, arts and science, business administration, education, engineering, mines, and nursing. Through the graduate school the master's degree is offered in almost every field, and programs have been inaugurated leading to the degree of doctor of philosophy in chemistry, English, geology, physics, and psychology. A summer school is maintained. In the fall of

1963 enrollment at the University of Nevada totaled 4151 students, 3321 of whom were in full-time attendance; the full-time faculty numbered 309. The library contained approximately 200,000 bound volumes.

NEVERS, capital of the French department of Nièvre, at the influx of the Loire, 159 miles s.s.e. of Paris. It has been the seat of a bishop since 506. The *palais-de-justice*, dating from 1475, was formerly the castle of the dukes of Nevers; there is a triumphal arch (1746) commemorating Fontenoy. The industries comprise the manufacture of iron cables, chemicals, cloth, glue, shoes, chains, and porcelain. Pop. (1962) 38,801.

NEVILLE or **NEVILL**, an English noble family, founded in 1131. The outstanding members of the family are the following. **1.** RALPH DE NEVILLE, 2nd BARON NEVILLE (1291?-1367), who supported King Edward III against the invading Scottish barons during the Hundred Years' War, and was the principal commander of the English forces at the victorious battle of Neville's Cross in 1346. In 1355 he became governor of Berwick. **2.** JOHN DE NEVILLE, 3rd BARON NEVILLE (d. 1388), son of the preceding. He fought in the Hundred Years' War, serving in campaigns in France in 1345, 1349, and 1360. In 1370 he became admiral of the fleet, and in 1378 was appointed Edward III's lieutenant in Aquitaine, France. After 1381 he served as warden of the Scottish border. **3.** RALPH NEVILLE, 4th BARON NEVILLE, 1st EARL OF WESTMORELAND (1364-1425), son of the preceding. He was created earl in 1397 for his services as warden of the Scottish border. His second wife, Joan Beaufort, was a daughter of John of Gaunt and a half-sister of Henry of Lancaster (later Henry IV). Neville assisted Henry of Lancaster in his struggle against Richard II in 1399, and was rewarded by being named marshal of England and, in 1403, warden of the west marches. In 1405 he suppressed a rebellion against Henry IV at Shipton Moor. His daughter Cicely married Richard, Duke of York, and was the mother of King Edward IV and King Richard III. **4.** CHARLES NEVILLE, 6th EARL OF WESTMORELAND (1543-1601), grandson of the preceding. He was an active member of the Roman Catholic uprising in the north of England in 1569. When the revolt failed he fled to the Netherlands and was deprived in absentia of his hereditary estates and titles in 1571.

5. RICHARD NEVILLE, 1st EARL OF SALISBURY

in the Neville line (1400-60), son of the 1st earl of Westmoreland. He married Alice, only daughter of Thomas de Montacute, Earl of Salisbury, in 1425. He was appointed warden of the Scottish and west marches in 1434, and chancellor of England in 1454, during the protectorate of Richard Plantagenet, 3rd Duke of York. A supporter of the house of York during the Wars of the Roses, Neville fled to France in 1459 after the battle of Ludford. The following year he returned, and, after his faction had seized the king at Northampton, he was named chamberlain of England. Five months later, after the battle of Wakefield, Neville was captured by the Lancastrian forces and murdered. **6.** RICHARD NEVILLE, 2nd EARL OF SALISBURY in the Neville line, 15th EARL OF WARWICK (1428-71), son of the preceding, and known as "the Kingmaker". In 1449 he married Anne Beauchamp, the daughter of the earl of Warwick, who brought her husband the title and most of the Warwick estates. During the Wars of the Roses he supported the Yorkist faction, and was rewarded with the captaincy of Calais in 1456. He was largely responsible for the Yorkist victories of Northampton in 1460 and Towton in 1461. After Edward IV was proclaimed king, Neville was virtual ruler of England from 1461 to 1464; in 1467, displeased with Edward's favoritism toward his wife's relatives he allied himself with the Lancastrian Queen Margaret. Neville instigated the Yorkshire rebellion led by Robin of Redesdale in 1469, and, joining the exiled Queen Margaret in France, aided her in an invasion of England, during which Edward IV was forced to flee the country. Neville had the weak-minded King Henry VI released from imprisonment in the Tower of London in September, 1470, and actually ruled England himself for the next six months. When Edward IV returned and the Yorkists rallied to his banner, Neville was outmaneuvered and slain at the battle of Barnet on April 14, 1471. He was the hero of Lord Edward Bulwer-Lytton's novel *The Last of the Barons* (1843).

7. JOHN NEVILLE, MARQUIS OF MONTAGUE, EARL OF NORTHUMBERLAND (d. 1471), brother of the preceding. He fought with distinction on the Yorkist side early in the Wars of the Roses. He defeated the Lancastrian forces at Hexham in 1464, and was created marquis and earl. However, he abandoned the Yorkist cause after the earldom of Northumberland had been restored to Henry Percy in 1469. He was killed fighting on the Lancastrian side at the battle of Barnet. **8.** GEORGE NEVILLE,

(1433?-76), English divine, educated at Oxford University. Through the influence of his father Richard, Earl of Salisbury, then chancellor of England, and of his brother Richard, Earl of Warwick, his preferment was rapid. From 1453 to 1457 he was chancellor of Oxford University. In 1458 he became Bishop of Exeter, and in 1464 he was appointed Archbishop of York. From 1460 until 1467 he was chancellor of England. During the short reign of Henry VI (1470-71), he again held the chancellorship, but surrendered himself and Henry to Edward IV who had returned from Holland and had defeated Warwick at Barnet (1471). Neville was imprisoned in the Tower of London, but was soon pardoned. Edward imprisoned him again from 1472 to 1475, however, on a charge of treason.

NEVIN, ETHELBERT WOODBRIDGE (1862-1901), American composer, born in Edgeworth, Pa., and educated at the Williams Conservatory in Pittsburgh, Pa., and in Berlin, Germany. In 1887 he settled in Boston, Mass., as a music teacher and devoted much of his time to the composition of songs. The first of his songs to gain lasting popularity was "Oh That We Two Were Maying" (1888). In 1891 he moved to Europe for a six-year period, during which he continued to compose songs and piano suites and worked on several orchestral compositions, none of which were ever completed. Of his numerous piano pieces the best known is "Narcissus", from the suite *Water Scenes* (1891). Among his many songs are the popular "The Rosary" (1898) and "Mighty Lak' a Rose" (1901). His completed work was almost entirely confined to short forms, and is characterized by an emphasis upon simple, often sentimental melody.

NEVINS, ALLAN (1890-), American educator, historian, and biographer, born in Camp Point, Ill., and educated at the University of Illinois. From 1913 to 1931 he was a member of the editorial staff of various newspapers and periodicals published in New York City. In the latter year he was appointed professor of American history at Columbia University; he retired from the post in 1958. He was elected a member of the American Academy of Arts and Letters in 1954. Nevins is best known for his historical and biographical writings, which are characterized by their freshness and clarity of style, thoroughness of scholarly research, and liberal social and political outlook. His works include *Life of Robert Rogers* (1914), *America in World Affairs* (1941), *The Ordeal of the Union* (1946), *Emergence of Lincoln* (1950), *The World of Eli Whitney* (with Jeannette Mir-

sky, 1952), *Statesmanship of the Civil War* (1953), *Ford: The Times, the Man, the Company* (with Frank E. Hill, 3 vols., 1954-62), *The War for the Union* (vol. 1, 1959; vol. 2, 1960), and *Herbert H. Lehman and His Era* (1963). He edited *Diary of John Quincy Adams* (1928), *The Heritage of America* (with Henry Steele Commager, 1939), and *The Diary of George Templeton Strong 1835-1875* (with Milton H. Thomas, 1952).

NEVIS, one of the Leeward Islands, British West Indies. The chief city is the port of Charlestown (pop., about 2850). Alexander Hamilton was born in Nevis. Area, 36 sq.m.; pop. (1960) 12,916.

NEVSKI, ALEXANDER. See ALEXANDER NEVSKI.

NEVUS or **BIRTHMARK**, term applied to any number of superficial benign tumors (see CANCER) on the body surface of a human being. Such tumors are almost always congenital. The term "nevus" when unqualified refers to a cutaneous tumor consisting of blood capillaries, or rarely of venules or arterioles. Such tumors, which rarely spread from their original site, and which consequently are not dangerous to life, vary in color according as the capillaries composing them carry arterial or venous blood. Thus, the popularly termed "cherry marks", and "port-wine stains" or "claret stains" are nevi containing arterial blood and venous blood respectively. These nevi are on a level with the surface of the skin. Certain other vascular nevi, commonly known as "strawberry marks" or "raspberry marks", are slightly elevated above the surface of the skin. Vascular nevi comprise most birthmarks; two thirds of the vascular nevi are found on the face and head region. The term "nevus" is also applied with qualifying adjectives to superficial tumors derived from epithelium, nervous tissue, connective tissue, or fat. Among such tumors are pigmented spots and hairy moles. Disfiguring nevi may be removed by electrosurgery.

Birthmarks have been mentioned in the literature of civilized countries for thousands of years. At first, because these marks sometimes resembled in outline animals or familiar inanimate objects, birthmarks were believed to be visitations of divine anger; later, this superstition was replaced by one still current in many regions, that the marks are expressions of wishes or emotions of the mother during her pregnancy. Modern scientists, although they do not as yet know the origin of nevi, tend to search for the causes of nevus-formation in the field of tissue development or histogenesis.

NEW ALBANY, county seat of Floyd Co., Ind., situated on the Ohio R., opposite Louisville, Ky. It is served by four railroads and by river steamers. New Albany is an important manufacturing center, and the commercial center and shipping point of an agricultural area noted for the production of strawberries and dairy products. In the vicinity are extensive coal fields, and the city is provided with extensive hydroelectric power from the falls in the Ohio R. Industrial establishments include one of the largest plants in the U.S. for the manufacture of prefabricated houses. New Albany was settled in 1813, incorporated as a town in 1819, and chartered as a city in 1839. Pop. (1960) 37,812.

NEW AMSTERDAM. See MANHATTAN.

NEWARK, county seat and port of entry of Essex Co., N.J., situated on Newark Bay and the Passaic R., 8 miles w. of the s. end of Manhattan Island. Transportation facilities include six railroads; the Hudson and Manhattan Railroad, operating trains to New York via tunnels under the Hudson R.; a subway system; coastal and overseas steamship lines; and the Newark Metropolitan Airport, until recently the principal air terminal for the New York metropolitan area. Newark, the metropolis of New Jersey and the thirtieth (1960) largest city in the U.S., is one of the principal commercial and manufacturing centers in the country. Among the chief products of the extensive and highly diversified industrial establishments in Newark are paints, varnishes, chemicals, drugs, lubricating oil, electrical machinery and equipment, machinery and machine-shop products, metal products, motor-vehicle bodies and parts, airplanes, radio equipment, phonographs, jewelry, cutlery, leather goods, shoes, celluloid, cosmetics, malt liquors, beverages, bakery products, packed meats and other food products, cigars and cigarettes, furniture, paper boxes, and dressed furs. In addition, the city is an important retail and wholesale trading center and a leading insurance center. The Port of Newark, on Newark Bay, development of which began in 1914, comprises an important part of the New York metropolitan port area. The port has an improved harbor, with a channel 30 ft. in depth and 400 ft. in width. Water-front facilities include large warehouses, and miles of railroad track, and more than 140 docks and piers. Lumber and paper are the chief exports of the Port of Newark.

Among the educational institutions in the city are the University of Newark, the New Jersey State Teachers College, the Newark

College of Engineering, the New Jersey College of Pharmacy (now an affiliate of Rutgers University), Newark Technical School, and Newark Public School of Fine and Applied Arts. Newark is an episcopal see of the Roman Catholic and Protestant Episcopal churches, and the site of several Federal and State governmental agencies. Cultural facilities are provided by the Newark Public Library, noted for its progressive innovations; the Newark Museum, originally part of the library, with exceptional collections on art, science, and industry; and the New Jersey Historical Society, the Newark Art Club, the Griffith Music Foundation, and the Bach Society of New Jersey. Parks and playgrounds within the city cover an area of approximately 1000 acres. The Trinity Episcopal Cathedral, built in 1743, and the First Presbyterian Church (1791) are notable landmarks.

Newark was settled in 1666 by a company of Puritans from Connecticut, under the leadership of Robert Treat. The first settlement was established on a site known as the "Four Corners", now the intersection of the principal business thoroughfares, and was named after Newark-on-Trent, England, the home of one of the religious leaders of the colony. It was incorporated as a township in 1693. From 1747 to 1756 it was the site of the College of New Jersey, now Princeton University (q.v.). The present important leather industry in Newark had its beginning prior to the Revolutionary War. During the war the town and vicinity were the site of several military engagements. After the Revolutionary War Newark entered upon a period of rapid industrial development. It was incorporated as a city in 1836. Pop. (1960) 405,220.

NEWARK, county seat of Licking Co., Ohio, on the Licking River, 33 miles n.e. of Columbus. Its manufactures include table glassware, bottles, and agricultural implements. Indian mounds are found here. Pop. (1960) 41,790.

NEW BEDFORD, city, seaport, and a county seat of Bristol Co., Mass., situated at the confluence of the Acushnet R. and Buzzards Bay, about 50 miles s. of Boston. It is a leading fishing and textile-manufacturing center, and there are shipyards, boatbuilding plants, and factories engaged in the production of machinery, electrical equipment, paper and rubber goods, shoes, clothing, hardware, and glass. New Bedford has an excellent harbor and modern cargo-handling facilities; it is a regular port of call of coastwise steamships and of ferries operating to Nantucket and Martha's Vineyard. Noteworthy points

of interest include the Bourne Whaling Museum; the Seamen's Bethel, described by the American author Herman Melville in the novel *Moby Dick* (1851); the Public Library, which contains valuable material relating to the whaling industry; Friends' Academy, founded in 1810; and the old U.S. customs-house.

Bedford, the first permanent settlement on the site of the present-day city, was established in 1760 as part of the township of Dartmouth. Whaling and freight-carrying vessels began operating out of the port a few years later. During the American Revolution many privateers sailed out of Bedford. In retaliation a British force attacked the town in 1778, reducing most of it to ashes. Bedford was incorporated as a separate town and given its present name in 1787. During the first half of the 19th century New Bedford developed into the principal whaling port in the United States and a center of the fishing industry. By 1857, ten years after New Bedford was chartered as a city, the whaling fleet alone aggregated more than 300 vessels. Whaling declined in importance after 1860; textile manufacturing became a leading industry during the 1880's. Pop. (1960) 102,477.

NEW BERN, county seat and port of entry of Craven Co., N.C., situated at the confluence of the Neuse and Trent rivers, 35 miles from the Atlantic Ocean, and 75 miles N.E. of Wilmington. Transportation facilities include three railroads, coastal steamers, and steamers and barges on the Inland Waterway, with which New Bern is connected by a 12-foot channel. The city is the trading, distributing, and shipping center of a rich area producing livestock, cotton, tobacco, and lumber. Among the industrial establishments are one of the largest lumber mills in the southeast, and sawmills, boatbuilding yards, machine foundries, cottonseed-oil mills, tobacco-processing plants, oyster canneries, and factories manufacturing wood veneers, boxes and shooks, railroad cars, and fertilizers. New Bern is the site of a national cemetery and of the ranger district headquarters of the Croatan National Forest. The city contains many notable buildings, including the First Presbyterian Church, built in 1819-22 after a design by the English architect Sir Christopher Wren; Christ Church (Episcopal), built in 1873 to replace an earlier church, which has a silver communion service presented in 1752 by King George II; and a remaining wing of the Tryon Palace, completed in 1770, home of William Tryon, British colonial governor of North Carolina

(1765-71), and said to be the finest residence in the colonies at the time of its construction. At Cherry Point, 19 miles S.E. of the city, is a large Marine Air Station.

New Bern, second oldest town in the present State, was settled in 1710 by a group of Swiss and Germans led by Baron Christopher de Graffenried and incorporated as a city in 1723. It became an important seaport and was the provincial capital for several years. In 1749 the first printing press and the first private secondary school in North Carolina were established there. The first provincial congress met at New Bern in 1774. During the Civil War the city was of considerable military importance and was captured by Federal forces on March 14, 1862, after a hard-fought engagement. Although Confederate troops attempted on several occasions to retake the city, it remained in Federal possession until the end of the war. Pop. (1960) 15,717.

NEWBERRY, county seat of Newberry Co., S.C., situated 42 miles N.W. of Columbia. It is served by two railroads, and is surrounded by a farming, dairying, and lumbering area. In the vicinity of the town are granite quarries. Newberry is an important cotton market, and contains factories producing cotton yarn and cottonseed-oil products, dairy products, and flour and meal. In the town is a State fish hatchery, comprising 25 small lakes formed by natural springs. Newberry is the headquarters for the Enoree Ranger District of the Sumter National Forest, and is the site of Newberry College (Lutheran), established in 1859. The town was settled about 1830 and incorporated in 1894. Pop. (1960) 8208.

NEWBOLT, SIR HENRY JOHN (1862-1938), English author, poet, and barrister, born in Bilston, and educated at Oxford University. While practicing law, he wrote a historical novel, *Taken from the Enemy* (1892), which he followed with *Mordred* (1895), a tragedy in blank verse, and *Admirals All* (1897), a volume of ballads which established his literary reputation. He gave up law in 1899 and was editor of the *Monthly Review* from 1900 to 1905. From 1911 until 1921 he was professor of poetry at Oxford University, except for the period of his service in World War I as controller of wireless and cables. His other volumes of verse dealing with the sea include *The Sailing of the Long-Ships* (1902), *Songs of the Sea* (1904), and *Drake's Drum and Other Poems of the Sea* (1914). Newbolt is also known for his *Naval History of the Great War* (1920), volume IV of *Naval Op-*

erations (1928), cumulative official history of the British navy, and critical essays such as *Studies Green and Gray* (1926) and *New Paths on Helicon* (1927).

NEW BRAUNFELS, county seat of Comal Co., Tex., situated on the Guadalupe R., 30 miles N.E. of San Antonio and 45 miles S.W. of Austin. It is served by two railroads. The surrounding area produces cotton, corn, grain, livestock, dairy products, and lumber, and contains deposits of limestone, clay, and lignite. Industrial establishments in the city include flour mills, a creamery, a lime kiln, a gypsum plant, a rock-wool plant, plants processing cedar oil and leather, and factories manufacturing woolen worsteds, cotton textiles, hosiery, and garments. New Braunfels is a popular resort, noted for its Comal Springs, the largest in the State. Through the center of the city flows the spring-fed Comal R. The city contains a park in which the waters of the several springs meet to form a reservoir. New Braunfels was founded in 1845 by a group of German colonists under the leadership of Prince Carl of Solms-Braunfels. It was the first town in the State to inaugurate a tax-supported public-school system. Pop. (1960) 15,631.

NEW BRITAIN, city of Hartford Co., Connecticut, 9 miles W. of Hartford. Principal products include hardware, cutlery, jewelry, and hosiery. Pop. (1960) 82,201.

NEW BRITAIN, or (Ger.) NEU-POMMERN, largest island of the Bismarck Archipelago, 50 miles N.E. of New Guinea. It became part of a German protectorate in 1884, and since World War I has been ruled by Australia under a mandate. In the interior there are several volcanoes, the highest being the Father (3900 ft.). The climate is hot and moist. The chief crop is coconuts. The natives are cannibals of the Melanesian division. Area, with adjacent isles, 14,600 sq.m.; pop. (1960 est.) 107,362.

NEW BRUNSWICK, county seat of Middlesex Co., N.J., on the Raritan River, 31 miles S.W. of New York, at the terminus of the Delaware and Raritan Canal. It is the seat of Rutgers University (1766). New Brunswick is noted for its rubber factories, and also has iron and brass foundries, and manufactories of hosiery, lamps, needles, and paper hangings. Here Gen. Howe, the British commander in chief, established his headquarters, June 17, 1777. Pop. (1960) 40,139.

NEW BRUNSWICK, one of the Maritime Provinces of Canada. It is bounded on the N. by the province of Quebec, on the E. by the

Gulf of Saint Lawrence and Northumberland Strait, on the S.E. by Nova Scotia, on the S. by the Bay of Fundy, and on the W. by Maine. The province, which is nearly rectangular in shape, measures about 190 m. in a N.-S. direction and about 160 m. in an E.-W. direction. Its area is 27,985 sq.m.; the population (1961) is 597,936. Fredericton (q.v.) is the capital. The largest city and chief seaport is Saint John (q.v.). Moncton (q.v.) and Edmundston are other important communities.

Physical Characteristics. Except along the Gulf coast and in the river valleys, where the terrain is generally level, New Brunswick is a region of rolling hills and low, rugged highlands. The Appalachian Mountains system is represented in New Brunswick by the Central Highlands, a belt of mountainous country, about 35 m. wide, which crosses the N. part of the province in a general N.E.-S.W. direction. Elevations of more than 1500 ft. are common in the Central Highlands; the chief summit, Mt. Carleton (2690 ft.), is the highest point in the province. To the N. of the highlands is the Northern Plateau, which has an average elevation of about 1000 ft. The Southern Uplands, with elevations of more than 1000 ft. in places, lie along the Bay of Fundy in a belt about 25 m. wide. The remaining central and E. region of the province is mostly a rolling lowland traversed by many rivers. Most of these rivers, the chief of which is the Miramichi R., flow toward the Gulf of St. Lawrence. In the W. part of the lowland region most of the rivers form part of the Saint John R. system. The Saint John rises in N. Maine, enters New Brunswick at the N.W. corner of the province, and flows S. and S.E. through a rich agricultural valley. Along the lower course of the Saint John R. there are many long lakes. The river empties into the Bay of Fundy through a rocky gorge; at high tide, the waters of the bay rush upstream through this gorge, causing the spectacular phenomenon known as the Reversing Falls. Other rivers of the region include the Restigouche and the Petitcodiac.

The terrain along the seacoast of New Brunswick is varied. The W. part of the shore along the Bay of Fundy is deeply indented and has many coves, rocky headlands, and offshore islets; the coast along the E. part of the bay, where the Southern Uplands descend to the sea, is straight and steep. The coast along the Gulf of Saint Lawrence is low and has many sandy beaches. The rivers of the region terminate in estuaries which allow the passage of ships upstream for a considerable