

Nation Below the Sea Level



A Sentinel on Holland's Battle Line Against the Sea.

Prepared by the National Geographic Society, Washington, D. C.

The Netherlands, which celebrated the silver jubilee of their queen recently, usually go so quietly and efficiently on their way and have so few of the turmoils and alarms that in large part make up modern news, that the outside world seldom appreciates that here is a country that is one of the best ripened and most wholesome of the fruits of civilization; a land in which war has been transfigured into a successful strife of science against nature; in which theft has all but conquered poverty; and in which kindly human nature has developed a social system and governmental machinery that seem to bring contentment to the whole spotless, busy, intelligent population.

There are paradoxes in the Netherlands that catch the eye more quickly than the solid facts. First is the matter of the country's name. To the English-speaking world it is "Holland." But this is no more the correct name than "Virginia" is the name of our Union. "Holland" is merely the name of two of the states of the United Netherlands.

And this only begins the paradoxes. It is a country where the rivers run, so to speak, over the heads of the inhabitants. Populous cities rest below the level of the sea, which persistently clamors for admission. Cultivated fields are buried under unproductive sand, and marshes are drained to become fertile gardens. Holland's very existence is a paradox in physical geography.

The face of the earth is usually accepted as being rather old in comparison with man and his works. But not so in Holland. The Dutch have molded and reshaped and constructed the features of their land more radically than the most modern surgeon has rebuilt the faces of mangled war victims. A large part of the country has been wrested from the sea and is held every day from its aggressive waves.

Everywhere there are canals, some so small that they barely accommodate a rowboat and others so large that they will float an ocean liner. Primarily, most of the canals are drains, and the carrying of traffic is an incident, though in many cases a most important incident.

Elaborate Drainage Systems.

Since most of the land is below the level of the sea, the soil must be drained before it can be tilled. Ditches are dug, into which the water runs. As these become full, the water is pumped into others having higher banks; then from the latter into others still higher, until finally sea-level is reached. The laws of nature are reversed. The drainage is from lower levels to higher. In the early steps the water is lifted by wind power, but soon the volume becomes so great and such a large area of land is vitally concerned in its prompt removal that the state erects a pumping station and a trusted official sees to it that the water in his canal does not remain above its assigned level.

Thus the drains become greater and greater and may be used as waterways. Their banks, made of sandy earth, must be reinforced by being faced with stone or fortified by piles. In the case of the larger streams, these banks become dikes, and both stone and piles are needed in order to control the waters. There is not a stone quarry in Holland; yet because of its faced dikes it has more stone-work to the square mile than any other country in the world. Its forests are too few to supply fuel for its inhabitants; yet it has millions of great tree trunks made of wood, driven in to serve as building foundations or held in check the washing waters. The huge dikes along the North sea, on both sides of the River Maas, skirting the Rhine and the Zuider Zee, are faced with piles as close together as they can be packed, and these are driven in to protect the land from the sea.

At intervals in the canals will see against the banks, projecting above the water, boards with black horizontal lines and figures that look like giant thermometers without the tubes of mercury. They are gauges which show at the top the bench mark of Amsterdam or the zero to which all water levels are referred. The numbers on the board have minus signs before them and indicate the level of the canal water below Amsterdam. It means that the water on which you are looking is running along below sea-level, a bit of information that may make you shudder.

Pumping Carefully Regulated.

Since numerous small canals are emptied by wind-driven pumps into each larger and higher one, there must be a limit to the pumping at each transfer station for water might be put into a canal more rapidly than it could be removed elsewhere. Then, too, the canals emptying into the sea have their discharge limited by the height of the tide at their mouths. So it becomes necessary that at each station the height of water should have a fixed limit. The official in charge of each station is instructed not to pump after the water in the receiving canal has reached a certain height, and that the water in the lower canal should be kept below a certain level—that is, if it rises above that height there is danger of an overflow.

From this it can be seen that a local engineer might be embarrassed by conflicting orders. He may be forbidden to pump water into one canal because it is ready to overflow, and know at the same time that the lower canal is dangerously full. Fortunately for him, he is not called upon to worry about this. The latter condition has already been observed by the district inspector, and notices served that pumping into this lower canal should cease at once. The canals still lower might thereby be in danger of overflow, but that would cause the pumps still lower down to stop until the individual farmers would be forced to throw their wind pumps out of gear. This might cause some fields to become submerged, but the principle is observed that it is better for the water to rise gently over a few fields than to have a large canal burst its banks, and the rushing waters endanger life as well as property.

This entire question of drainage, the conduct of rivers to the sea, and the protection of exposed shores is under the direction of the Ministry of Water Affairs.

Close to Amsterdam, less than a century ago, there was an inland sea over which ships sailed and on which there was once a naval battle. Now that body of water does not exist. In its place is a beautiful, quiet, prosperous countryside of farms and gardens, roads, meadows and canals.

Here is how the lake was "excised" and its bottom added to the constantly growing Netherlands:

An encircling dike was constructed, with a large canal on its outer face. Great pumps, lifting a thousand cubic feet at each stroke, poured the water of the lake into the encircling canal. After thirty-nine months the commission charged with this work made the laconic report, "The lake is dry," and the medal they issued in commemoration of the event contained in Latin the inscription: "Haarlem Lake, after having for centuries assailed the surrounding fields, to enlarge itself by their destruction, conquered at last by the force of machinery, has returned to Holland its 44,280 acres of invaded land."

These acres are now occupied by about twelve thousand people, and their products are the choicest of the land. In this vast plain, so recently the foraging ground of crabs, lobsters and eels, straight roads are bordered with feathery-topped trees such as poplars, painted; substantial and even ornamental furnishings are seen on

NOTICE OF TEACHERS' EXAMINATION

Notice is hereby given that the County Superintendent of Morrow County, Oregon, will hold the regular examination of applicant for State Certificates at the Court House, as follows:

Commencing Wednesday, December 19, 1923, at 9 o'clock a. m. and continuing until Saturday, December 22, 1923, at 4 o'clock p. m.

Wednesday Forenoon
U. S. History, Writing (Penmanship), Music, Drawing.

Wednesday Afternoon
Physiology, Reading, Manual Training, Composition, Domestic Science, Methods in Reading, Course of Study for Drawing, Methods in Arithmetic.

Thursday Forenoon
Arithmetic, History of Education, Psychology, Methods in Geography, Mechanical Drawing, Domestic Art, Course of Study for Domestic Art.

Thursday Afternoon
Grammar, Geography, Stenography, American Literature, Physics, Typewriting, Methods in Language, Thesis for Primary Certificate.

Friday Forenoon
Theory and Practice, Orthography (Spelling), Physical Geography, English Literature, Chemistry.

Friday Afternoon
School Law, Geology, Algebra, Civil Government.

Saturday Forenoon
Geometry, Botany.

Saturday Afternoon
General History, Bookkeeping.

Very truly yours
J. A. CHURCHILL,
State Supt. Public Instruction.
32-34

SUMMONS

In the Circuit Court of the State of Oregon for Morrow County.

Charles Beckett, Plaintiff,
vs.
Gladys Beckett, Defendant.

To Gladys Beckett, Defendant.

In the name of the State of Oregon, you are hereby required to appear and answer the complaint filed against you in the above entitled suit on or before six weeks from the date of first publication of this summons, or on or before six weeks from the date of service upon you, if served personally without the State of Oregon, and if you fail to so answer for want thereof, the plaintiff will apply to the court for the relief prayed for in his complaint, to-wit:

For a decree of the court granting to the plaintiff an absolute divorce from the defendant and granting to the plaintiff the care and custody of the minor children of the plaintiff and defendant.

This summons is served upon you by publication in the Heppner Herald, a weekly newspaper of general circulation published at Heppner, Morrow County, State of Oregon, once a week for the period of six weeks, by order of the Hon. William T. Campbell, County Judge of Morrow County, State of Oregon, made and entered on the 3rd day of December, 1923, and the date of first publication of this summons is December 4, 1923.

WOODSON & SWECK,
Attorneys for the Plaintiff.
32-35 Address, Heppner, Ore.

NOTICE OF SHERIFF'S SALE UNDER FORECLOSURE

In the Circuit Court of the State of Oregon for Morrow County

Helen V. Knappenberg, Plaintiff,
vs.
A. C. Allison and Cora A. Allison, his wife, and the Farmers and Stockgrowers National Bank, a corporation, Defendants.

Notice is hereby given, that under and by virtue of an execution and order of sale issued out of the above entitled court in the above entitled cause to me directed, dated the 30th day of November, 1923, upon a judgment rendered and entered in said court on the 25th day of October, 1923, in favor of the plaintiff, Helen V. Knappenberg and against the defendants above named for the sum of \$10,000 with interest thereon from November 1, 1920, at the rate of 6 per cent per annum, \$640 attorneys fees and costs and disbursements taxed and allowed in the sum of \$18.50, and accruing costs of sale, and wherein the court decreed the sale of the real property mortgaged by the defendants, to secure payment of said judgment.

I will on Wednesday the 2d day of January, 1924, at the hour of 10 o'clock in the forenoon of said day, at the front door of the County Court House in the city of Heppner, Morrow County, Oregon, offer for sale and sell at public auction to the highest bidder for cash in hand, the following described real property

situated in Morrow County, Oregon, and ordered sold by the court, to-wit:

Southwest quarter, East half of the Northwest quarter, East half of the Southwest quarter of the Northwest quarter, West half of the Northeast quarter, West half of the Southeast quarter of Section 8, also that portion of the East half of the Southeast quarter of Section 8 lying west of the Gooseberry road, as the same is located and established over and across said lands, all in Township 1 South Range 24 E. W. M.

Or so much thereof as is necessary to satisfy said judgment, costs and accruing costs.

Heppner, Oregon, November 30, 1923.

GEORGE McDUFFEE,
Sheriff of Morrow County, Ore.
32-37

NOTICE OF FINAL ACCOUNT

Notice is hereby given that the undersigned, administrator of the estate of Caldonia Sperry, deceased, has filed his final account in said estate with the County Court of the State of Oregon for Morrow County, and the said Court has fixed Monday, January 7th, 1924, at the hour of 10 o'clock in the forenoon of said day as the time and the County Court room in the Court House at Heppner, Morrow County, Oregon, as the place of hearing objection to said final account and the settlement of said estate, and all persons having objections to said final account or to the settlement of said estate are hereby required to file the same in said court on or before the time set for the hearing thereof.

Dated this 13th day of November, 1923.

WAYNE SPERRY,
Administrator.
29-33

NOTICE OF SHERIFF'S SALE UNDER EXECUTION

Notice is hereby given that by virtue of an execution issued out of the Circuit Court of the State of Oregon for Umatilla County to me directed and delivered upon a judgment and decree rendered in said Court on the 31st day of October, 1923, in favor of The American National Bank of Pendleton, a corporation, against Ross Land & Sheep Co., Inc., a corporation and The Peoples Warehouse, a corporation, in a suit therein pending wherein the said The American National Bank of Pendleton, a corporation was plaintiff and the said Ross Land & Sheep Co., Inc., a corporation and The Peoples Warehouse, a corporation were defendants for the sum of \$15,500 together with interest thereon at the rate of 8 per cent per annum from the 5th day of October, 1922, until paid; for the further sum of \$2,358 together with interest thereon at the rate of 8 per cent per annum from the 6th day of October, 1922, until paid; for the further sum of \$2,366.20 with interest thereon from the 6th day of October, 1922, at the rate of 8 per cent per annum until paid; for the further sum of \$6,000 with interest thereon at the rate of 8 per cent per annum from the 6th day of October, 1922, until paid, and for the further sum of \$750.00 as a reasonable attorney fee to be allowed upon the \$20,000 note and for the further sum of \$235 to be allowed as a reasonable attorney fee upon the \$2,358 note and for the further sum of \$235 as a reasonable attorney fee upon the \$2,366.20 note and for the further sum of \$400 as a reasonable attorney fee upon the \$6,000 note and for the further sum of \$16.45 costs and disbursements, which said decree and judgment and order of sale have been duly docketed and enrolled in the office of the Clerk of said Court and in and by which said judgment and decree and order of sale it was directed that the hereinafter described real property in Morrow County, Oregon, to-wit:

The South half of the Northwest quarter; and the East half of the Southwest quarter of Section 13;

The South half of the Northeast quarter; the Northwest quarter of the Southeast quarter of Section 14;

The North half of the Southeast quarter; and the Southwest quarter of the Southeast quarter of Section 26;

The Northeast quarter; the North half of the Southeast quarter of Section 27;

The West half of the Northeast quarter; the East half of the Northwest quarter of Section 35;

All of said lands being in Township 1 South, Range 29 E.

quarter; the North half of the Southeast quarter; the Southwest quarter of the Southeast quarter of Section 26;

The Northeast quarter; the North half of the Southeast quarter of Section 27;

The West half of the Northeast quarter; the East half of the Northwest quarter of Section 35;

All of said lands being in Township 1 South, Range 29 E. W. M., in Morrow County, Oregon, and being a total of 1560 acres, more or less,

together with the tenements, hereditaments and appurtenances thereto belonging or in any wise appertaining and also all of the estate, right, title and interest of the said Ross Land & Sheep Co., Inc., a corporation and The Peoples Warehouse, a corporation, or either of them or both of them have in and to the same, said lands to be sold at public auction to the highest bidder for cash in hand, the proceeds of sale to be applied in satisfaction of said execution and all costs.

Dated this 26th day of November, 1923.

GEORGE McDUFFEE,
Sheriff of Morrow County, Ore.
31-35

W. M., in Morrow County, Oregon, and being a total of 1560 acres, more or less,

together with the tenements, hereditaments and appurtenances thereto belonging or in any wise appertaining, and also all of the right, estate, title and interest of the said Ross Land & Sheep Co., Inc., a corporation and The Peoples Warehouse, a corporation, or either of them or both of them have in and to the same, said lands to be sold at public auction to the highest bidder for cash in hand, the proceeds of sale to be applied in satisfaction of said execution and all costs.

Dated this 26th day of November, 1923.

GEORGE McDUFFEE,
Sheriff of Morrow County, Ore.
31-35

PROFESSIONAL CARDS

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