Lactation, Vitamin B in LaRue, Daniel Wolford Light's Speed Decreasing? Dean, Bashford Death, The Struggle for.... de Bray, M. E. J. Gheury Dictionary Compiled, Aztec Donovan, F. D. Pyorrhoea Danger in Tooth-Brushes INDEX TO THIS ISSUE 215 . 221 . 211 Aguirro, Porfirio 221 Airplanes, Model 223 Airplane War on Forest Insects 221 Alkali Flats Made by Wind 219 America, Early Man in 215 Antoniadi, E. M. 217 Arthur, John M. 219 Aztec Dictionary Compiled 221 "Rooster" Lays Eggs 219 Man Eats Little of Total Plant Sassaíras Shearer, G. Shie, Marvin D. Shollenberger, J. H. Spruce Budworm, Airplane War on Standards and Tests for Reagent and C. P. Chemicals Sure, Barnett Sassafras Production Man in America, Early Mathews, Albert P. Matter, Gravitation and Light, Nature of Mental Hygiene Mercury Has 2112-Hour Day Mishulow, Lucy Model Airplanes, Building and Flying Murray, B. L. Electricity, Experimental Researches in 217 Experimental Science, Part II. 221 Experimental Science, Part II. 221 Faraday, Michael 217 Feeding, Forcible, of Wheat 211 Fenton, Norman 219 Figgins, J. D. 215 Forest Insects, Plane War on 221 Friedberger, E. 219 Freud, Sigmund 221 Frewin, J. G. 221 Color of the Color 220 221 Bird Refuge on Heligoland 219 Castle of Crusaders Excavated 215 Cheating by College Girls 219 Chemicals, Standards and Tests for Reagent and C. P. 221 Classics of Science 217 Cold Increases Immunity to Poisons 219 Cole L. I. 219 Tattoo Marks Yield to Chemical Treatment Tooth-Brush Peril Toxins, New Color Test for Nature of Matter, Gravitation and Light 221 Nature Ramblings 223 Wheat, "Forcible Feeding" of Whitney, Willis Rodney Wind Makes Alkali Flats Zoology, Laboratory Course in General Girls, Cheating by College...... 219 215 Hay, O. P... Heligoland Now Bird Refuge... "Hv"... Foisons Cole, L. J. Color Test for Toxins Commerce Yearbook, 1926 Cook, Harold J. Crusader's Castle Excavated Plant Production, Man Eats Little of Total Poisons, Cold Increases Immunity to Powers, W. L. Pratt, Henry Sherring 219 "Hv" Hygiene, Mental Krumwiede, Charles Laboratory Course in General Zoology 219 221 Science News-Letter, Oct. 1, 1927 221 Davidson, Jehiel....

Tattoo Marks Yield to Chemicals

By Marjorie MacDill

The initials of the sweetheart-before-last tattooed over his heart in
festoons of passionate purple and
pink need worry Jack ashore no
longer. The indelible marks that
have served to betray him to the
fair one in the next port, or to legal
authorities looking for identification
marks, can now be erased with a
minimum of pain by the skillful art
of modern surgery and chemistry.
Dr. Marvin D. Shie, surgeon at

Dr. Marvin D. Shie, surgeon at Marine Hospital No. 6 of the U. S. Public Health Service at Cleveland Ohio, has evolved a technique by which he has achieved great success in removing anchors, lodge emblems, and hearts pierced with Cupid's arrows from the persons of those whose desire to be decorated has waned since their initial enthusiasm.

Tattooing Older Than History

Tattooing is the art of introducing coloring matter into the skin so that a more or less indelible design is left on the body. It was practised before the beginning of written history and is so widespread that it has been found in practically every quarter of the globe. Moses laid down the law to the children of Israel warning them against the heathenish Tattoo marks have been custom. found on the shriveled remains of Egyptian mummies thousands of years old. It reached its highest expression among the islands of the South Pacific and Japan where tattooers achieved the status, quite deservedly, of true artists.

The artistic merits of native tattooing, however, have fallen off since the advent of civilization though the practice is still as prevalent as it ever was, says Dr. Shie who is an authority on the subject. It enjoys flourishing popularity among sailors

and members of the underworld but these circles by no means compose the whole clientele of the modern tattoo parlor.

Life=Long Marks

A child-like joy in bizarre adornment plus the desire to display prowess in enduring pain are the principal factors that lead men to be tattooed very much as they were when savages. These motives are of the nature of a passing fancy and are seldom very permanent. Unfortunately the designs are. Favored subject material for tattoo designs frequently fail to meet the approval of followers of the late Anthony Comstock and taste for the obscene soon palls. Consequently the history of attempts to remove tattoos is nearly as old as the art itself.

Practitioners, regular and irregular, have had recourse to various methods, surgical, electrical and chemical, to efface the decorations no longer desired. But most of them have left scars as unsightly as the tattooing itself.

Method Causes Little Pain

Dr. Shie has achieved his success in this unique field by the use of two comparatively simple and well known chemicals, tannic acid and silver nitrate. A solution of the first is tattooed into the design with an electric needle or a dentist's drill. When it has been thoroughly tattooed well into the corium, or under layer of the skin, the excess of tannic acid is washed off with water and a stick of silver nitrate is rubbed over the whole area of the tattoo pattern. A black layer of silver tannate is deposited in the corium and the "wound" is covered with a dry dressing. Surprisingly little pain accom-

(Turn to page 213)



SCIENCE NEWS-LETTER. The Weekly Summary of Current Science. Published by Science Service, Inc., the Institution for the Popularization of Science or-

ganized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Publication Office, 1918 Harford Ave., Baltimore, Md. Editorial and Executive Office, 21st and B Sts., N. W., Washington, D. C. Address all communications to Washington, D. C.

Entered as second class matter October 1, 1926, at the postoffice at Baltimore, Md., under the act of March 3, 1879. Established in mimeograph form March 13, 1922. Title registered as trade-mark, U. S. Patent Office.

Subscription rate—\$5.00 a year postpaid. 10 cents a copy. Ten or more copies to same address, 5 cents a copy. Special reduced subscription rates are available to members of the American Association for the Advancement of Science. Advertising rates furnished on application.

Copyright, 1927, by Science Service, Inc. Republication of any portion of the SCIENCE NEWS-LETTER is strictly prohibited since it is distributed for personal, school, club or library use only. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service, details and samples of which will be gladly sent on request.

Staff of Science Service—Director, Edwin E. Slosson; Managing Editor, Watson Davis; Staff Writers, Frank Thone, James Stokley, Emily C. Davis, Marjorie MacDill, Gladys Moon Jones;

Sales and Advertising Manager, Hallie Jenkins.

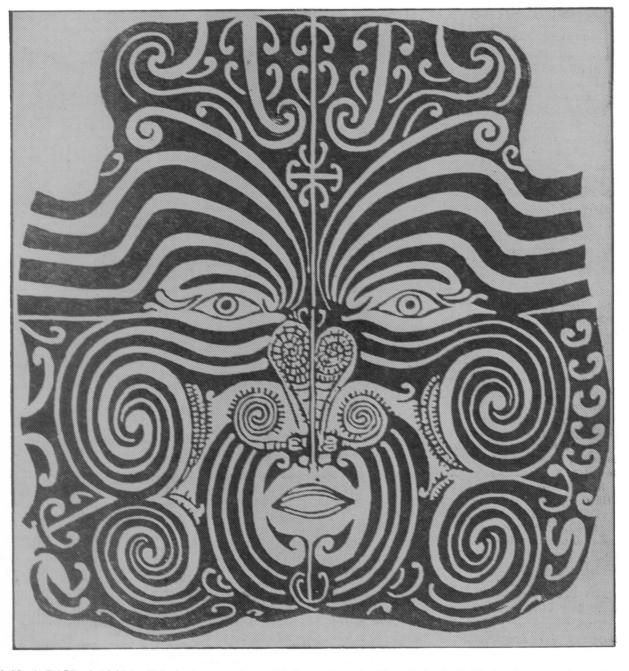
Board of Trustees of Science Service—Representing the American Association for the Advancement of Science, J. McKeen Cattell, Treasurer, Editor, Science, Garrison, N. Y.; D. T. MacDougal, Director, Desert Laboratory, Tucson, I. Pupin, Professor of Electromechanics, Columbia University, New York City. Representing the National Academy of Sciences, John C. Merriam, President, Carnegie Institution of Washington; R. A. Millikan, Director, Norman Bridge Laboratory of Physics, California Institute of Technology, Pasadena, Calif.; Dr. David White, Chairman of the Division of Geology and Geography, National Research Council: Representing National Research Council, Vernon Kellogg. Vice-President and Chairman of Executive Committee, Permanent Secretary, National Research Council, Washington, D. C.; C. G. Abbot, Director, Astro-Physical Observatory, Smithsonian Institution, Washington, D. C.; Victor C. Vaughan, Professor Emeritus of Hygiene, University of Michigan. Representing Journalistic Profession, John H. Finley, Associate Editor, New York Times; Mark Sullivan, Writer, Washington, D. C.; Marlen E. Pew, Editor of Editor and Publisher, New York City; Representing E. W. Scripps Estate, W. E. Ritter, *President*, Univesity of California; Robert P. Scripps, Scripps-Howard Newspapers, West Chester, Ohio; Thomas L. Sidlo, Cleveland, Ohio.



Edited by Watson Davis Vol. XII No. 338 10¢ a copy \$5 a year October 1, 1927

MEDICINE-ETHNOLOGY

Tattoo Marks Yield to Chemical Treatment



WHEN IS A FACE A MAP? This is the way the facial decorations of a New Zealand chief look when mapped out flat on paper

209

Story on page 210

Tattoo Marks Removable

(Continued from page 210)

panies this procedure. No anesthetic of any sort is required except when treating a sensitive area like the face and when the mark to be removed is very large.

"I have removed a mark seven inches by three inches from the forearm at one sitting with scarcely any discomfort," Dr. Shie explained, "and have removed four such marks from the forearm of one man in the course of ten days."

Removes Accidental Scars

There is very little reaction after the operation, no more than after the actual tattooing itself. The area gradually becomes hard and dry and slowly separates from the deeper layers of the corium. In a couple of weeks a dry hard slough comes off all in one piece that looks like a rather rough piece of thin grey leather. It contains the epithelium, the silver tannate, the superficial layers of the corium and the tattoo pigment. The skin where it came off shows pinkish at first but gradually takes on the color of the surrounding parts. Occasionally a few bits of coloring matter remain that have been deposited deeper than the rest but they can be removed by further treatments.

In a technical report of his procedure to the American Medical Association, Dr. Shie states that the method was first devised by an early investigator named Variot about fifty years ago. This worker seems not to have used it extensively and to the Public Health Service surgeon goes the credit for having worked out a comparatively painless technique that leaves little or no scarring.

The method has worked very well not only on ordinary tattoo marks but for blemishes caused by such accidents as powder burns where deposits of carbon under the skin leave unsightly marks. Dr. Shie has operated very successfully on cases where disfiguring scars have resulted from automobile accidents, and it is probable that the procedure will have an increasing application for this purpose in the future.

Red Lips or Blue

Tattooing as a means of obtaining permanently pink cheeks and Cupid's bow lips is a modern counterpart of the custom of the Maori tribes of New Zealand. They tattooed feminine lips to make them full and blue!



A MAORI CHIEF. Faces tattooed like his brought a good price in the head hunting days of New Zealand a hundred years ago. (Courtesy of U. S. National Museum)

The foreheads had a few coquettish touches but the lips were the most important. They must be carefully tattooed, native girls are said to have explained to early explorers, "else when we grow old our lips will shrivel up and we shall grow ugly."

Different races had different ideas on the matter but in general, for the men at least, tattooing was an ordeal that was a test of prowess. It was a disgrace not to be thoroughly tattooed. In the South Seas the body was decorated all over so that at a distance it was impossible to tell if natives were dressed in real clothes or merely in their own com-

pletely tattooed skins. In this region the designs were tribal marks so that an individual actually wore his ancestral coat of arms and his own personal and family history on his own body.

Brisk Trade in Tattooed Heads

In New Zealand the tattooing of the face of the Maori men reached a high degree of artistry and was reserved for people of rank. The face designs were called Mokos and were used as marks of identity for no two were alike. In the purchase of land from the natives of New Zealand in 1815 the chieftains copied

(Just turn the page)

Tattoo Marks Removable

(Continued from page 213)

out their Mokos as signatures to the deed. Well tattooed heads of chieftains slain in battle were cut off and carefully preserved by the enemy. Those whose facial designs were inferior had their heads ignominiously tossed aside.

The beautiful designs of the embalmed heads struck the fancy of traders who offered good prices for them and made a handsome profit selling them to museums and collectors in Europe. When the Maori found they could get good firearms, invaluable for carrying on their fierce intertribal wars, in exchange for the heads of their enemies' leaders, a brisk trade sprang up.

After intensive head hunting brought about a shortage in the really artistic Mokos of the hereditary leaders of the tribes, slaves and captives were tattooed for the market. One traveler in New Zealand in the first part of the nineteenth century describes a Maori chief lining up his underlings on the deck of a ship so that the trader might make his selection from among them and have the head appertaining thereto tattooed to order and embalmed ready for delivery on his next trip to the islands. Head hunting eventually reached such scandalous proportions that it excited the indignation of the authorities in Europe and was later suppressed by law.

Infection and Disease

In the old days when saliva and tobacco juice were frequently used as dressings for the newly tattooed area, serious complications were frequent, says Dr. Shie, who has made an extended study of the incidence of disease in connection with this practice. Leprosy, tetanus, tubercu-

LIVING BULLFROGS

Safe delivery guaranteed

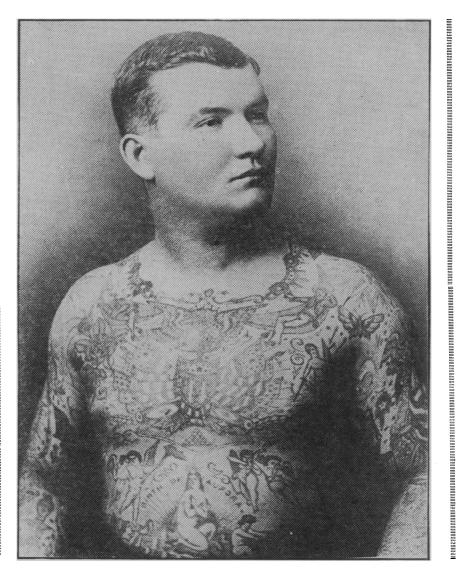
Teach Biology with live specimens where practicable.

We have the only complete live materials establishment in America. Live plants and animals representing all types are kept on hand under semi-natural conditions at all seasons.

Also headquarters for preserved specimens of all types, microscopic slides, life histories, demonstrations, osteological preparations, insect collections. We specialize in many important southern species not obtainable elsewhere.

All material guaranteed without reservations.

Southern Biological Supply Co., Inc.
Natural History Building
New Orleans, La.



This gentleman from a circus midway is a very complete specimen of the modern tattooer's art.

losis of the skin and syphilis have all been reported as a consequence where sanitary precautions were not observed by the operator. Nowadays the risk is not so great, according to Dr. Shie, because many of the professional tattooers use instruments that are reasonably sterile and "accidents" of this kind do not happen so often as they once did. Tattooing, however, that is done by wandering "artists" who work the carnivals, pool rooms, street fairs and dives of the underworld, where both the operator and his subject are usually under the influence of alcohol, is still risky.

This country has no federal or state laws regulating it in any way, although on account of the danger of spreading disease it has been forbidden to sailors and soldiers in France and Japan for many years. The Army and Navy make disfiguring designs a ground for rejecting a man from the service but only

three cities in the United States have ordinances governing tattooing, declares Dr. Shie. These are San Francisco, Calif., Cleveland, Ohio, and Norfolk, Va.

Infection and bad scars have resulted frequently from the attempts of advertising quacks to remove tattoo marks. Many instances have been reported to health authorities and consequently in several states there are laws that prohibit removal except by a qualified physician. In general, however, tattooing in the United States is practically unsupervised and unregulated.

Science News-Letter, October 1, 1927

A company has been formed in Tasmania to raise opossums for the fur market.

Scurvy, caused by inadequate diet, killed more people in the Middle Ages than the serious infectious diseases.