



Hunt Institute for Botanical Documentation
5th Floor, Hunt Library
Carnegie Mellon University
4909 Frew Street
Pittsburgh, PA 15213-3890
Telephone: 412-268-2434
Email: huntinst@andrew.cmu.edu
Web site: www.huntbotanical.org

The Hunt Institute is committed to making its collections accessible for research. We are pleased to offer this digitized item.

Usage guidelines

We have provided this low-resolution, digitized version for research purposes. To inquire about publishing any images from this item, please contact the Institute.

Statement on harmful and offensive content

The Hunt Institute Archives contains hundreds of thousands of pages of historical content, writing and images, created by thousands of individuals connected to the botanical sciences. Due to the wide range of time and social context in which these materials were created, some of the collections contain material that reflect outdated, biased, offensive and possibly violent views, opinions and actions. The Hunt Institute for Botanical Documentation does not endorse the views expressed in these materials, which are inconsistent with our dedication to creating an inclusive, accessible and anti-discriminatory research environment. Archival records are historical documents, and the Hunt Institute keeps such records unaltered to maintain their integrity and to foster accountability for the actions and views of the collections' creators.

Many of the historical collections in the Hunt Institute Archives contain personal correspondence, notes, recollections and opinions, which may contain language, ideas or stereotypes that are offensive or harmful to others. These collections are maintained as records of the individuals involved and do not reflect the views or values of the Hunt Institute for Botanical Documentation or those of Carnegie Mellon University.

About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Plant Lore

All that we value as
civilization ~~is~~ ^{comes} an inheritance
~~derived from~~ agriculture
and had its beginnings
in the experience
development of ^{primitive} man
the efforts of ~~Man~~ ^{Man}
to establish a more
stable existence ~~rather~~
than that afforded
could be supported by
natural products.

Conlyate a Good Reaction

These alleged facts
have their base on the
advanced steps of conlyat
rather than upon the
beginning x Requirement for
~~conlyat~~

develop conlyat
Met by separate
family organization
From the standpoint of
children's character

Sympodic recess do
not develop
curly

Plant Lore (Trans-Pacific)

Trans Pacific

Words Tara =

thorn or spine

An extremely spiny tree in
Borneo

Any sort of spine in Polynesian,
including the rays of a
star, or a star itself,
perhaps because it has rays

Q

Plant Life

Agriculture Extra European

~~very diff.~~
Archaeology has reached
very definite results on
this point. ~~Cane~~ came
in about 6000 to 10000
years ago

Plant Lore

Inti a Table-Land Deity

The Quichas or "Inca" people of Peru were not originally a table-land people, but are supposed to have had their original seat in the temperate valleys of the ^{eastern} slopes of the Andes.

The worship of the sun was not the tribal cult of the Quichua people, but was adopted from the Collas, as the table-land people were called.

The tribal god of ~~the~~ the Quichuas ~~was~~ was Viracocha ^{or Pachacamac,} the Season-Changer.

The Inca ~~who~~ who conquered the table-land is supposed to have ~~said~~ said to the vanquished prince of the Collas, "You worship the Sun, I worship Viracocha."

~~The wide distribution of sun worship is taken by~~

The wide ~~distribution~~ distribution of sun worship is taken by many ethnologists as a natural compliment to "The Lord of Day", to borrow an expression Amu Panchau, from the ritual of the sun in Peru. Yet it may be ~~as~~ a mistake to interpret sun worship as a spontaneous cosmopolitan reaction. In most of the tropical countries the sun is too familiar an object to arouse religious sentiments or solicitudes.

It is easily understood that in the bleak table-lands of the Andes the sun could be viewed as a beneficent deity whose favors of light and heat would be highly appreciated and propitiated by every inducement that the primitive imagination could devise.

To be checked.

Plant Lore

Inti a Table-Land Deity

The Quichua

The Worship of the sun was not the tribal cult of the Quichua people, but was adopted from ^{the} Collas, ^{as the} table-land people not called.

The Quichuas or "Inca" people of Peru were not originally a table-land people, but are supposed to have had their original seat in the temperate valleys of the slopes of the Andes.

The worship of the sun was not the tribal cult of the Quichua people, but was adopted from Collas, ^{the} ^{as the} table-land people not called.

The tribal god of the Quichuas was Viracocha the Season-Changer.

The Inca who conquered the table-land is supposed to have said to the vanquished prince of the Collas, "You worship the Sun, I worship Viracocha."

The wide distribution of sun worship is taken by many ethnologists as a natural ^{complement} to ~~the~~ "The Lord of Day", ^{to whom expression} ~~Apu Funchau~~, ^{from the cult of the sun} which was the term of veneration ^{in the sun} in Peru, but may be considered ⁱⁿ that most of the tropical countries the sun is too familiar an object to arouse religious sentiments or solicitudes.

~~But~~ it is easily understood that in the bleak table-lands of the Andes the sun could be viewed as a beneficent deity whose favors of light and heat would be highly appreciated and propitiated by every inducement that the primitive imagination could devise.

~~For yet yet it may be a mistake to interpret sun worship as a direct~~
~~to accept assumption as a direct~~
~~sun worship as a sun worship to look~~
~~upon sun worship as a direct or simply~~
~~spontaneous reaction to spontaneous~~
Hunt Institute for Botanical Documentation

Plant Lore

table land. is ~~quite~~ ^{supposed} to have ~~seen~~
~~to be~~ ^{beaten} ~~conquered~~ ^{conquered} ~~the~~
vanquished power of
the Collas, "you
worship the Sun, I worship

Viracocha -

The arid destitution of
sun-worship is taken by
many ethnologists as a
natural ~~com~~ complement to
the Lord of Day " ~~of the~~
~~sun~~ ^{sun} ~~which~~ ^{which} ~~is the~~ ^{is the}
most of the ~~most~~ ^{most} ~~of the~~ ^{of the}
veneration in Peru ~~but~~ ^{but} ~~the~~ ^{the}
most of the ~~most~~ ^{most} ~~of the~~ ^{of the}
the sun is too familiar
an object to ~~can~~ ^{can} ~~object~~ ^{object}
to arouse religious feelings,
sentiments or solicitudes.

it is ~~an~~ ^{an} ~~understanding~~ ^{understanding} that
But when he bleeds table - I am
of the Andes it is the
~~sun~~ ^{sun} ~~would~~ ^{would} the sun
~~would~~ ^{would} appear as a beneficent
could be viewed as
a beneficent deity
whose favor of light
and heat would be
highly appreciated
and propitiated by every
inducement that the
primitive imagination could
devise

The sun is most appreciated in
a chilly climate. ~~like in~~
~~cold climates~~, and the bleak
table lands of Peru
afford ~~are especially~~
well ~~a~~ are well constituted
give a natural training
in heliostasy. The
growth of ^{crops} plants is ~~so~~
directly and obviously
dependent upon the
sun, ^{so} that a natural
training ~~toward~~ ⁱⁿ heliostasy
is afforded.

Plant Lore

"The Son of Heaven himself occupied a position of absolute theoretical but minor actual power, and one of unique accountability. Any misfortune which befell his people was considered to be due to some dereliction of duty on his part. The happiness and prosperity of the population referred to by the Chinese as the 'people of the hundred surnames', was the be-all and end-all of his existence. If an earthquake shook the land; if floods broke through the dykes; if drought burnt up the crops; if rebellions and dissatisfaction were manifest in the State, the One-Man - as he was called - must seek the reason for such calamity in his own conduct. If disorder continued apparently incurable, it was understood to be a sign from Heaven and from the people that the Decree by which the Emperor ruled had been revoked; it was then his duty to step down from the Dragon Throne, and if he did not do so, it was considered to be the duty of some public-spirited citizen to raise the standard of revolt, to induce the people to cry 'Down with the Tyrants! and, the fact accomplished, to found a new Dynasty."

~~(Hobart, Alice Tisdale, Within the Walls of Nanking, Proem, p. 12)~~

(Ayscough, Florence in Hobart, Alice Tisdale, Within the Walls of Nanking, Proem, p. 12.)

*Analogy with weather responsi-
bility of the Incas.*

Play ~~in~~ _{the}

To listen across the
ages for words that
are some of the
pre-historic words
that still may be
echoed in ~~human~~ ^{the}
speech of the long.

Plant Lore

Much progress had to be made by primitive man before he could reach the stage of leaving behind him lasting evidences of his existence. The arts of working in stone or other lasting materials had to be developed, or engineering works of a scale that required the organized cooperation or control of many individuals.

Such evidences are found in many parts of the world, as pyramids or mounds of earth rubble, or fitted stonework, and cut, fashioned or modeled objects of stone, metal, bone or pottery, showing an early development of several of the arts, but usually with no way to establish the age or even the relative antiquity of the various objects.

and cut ~~by~~ fashioned or
modeled objects of stone,
metal or ~~pottery~~ bone
or pottery, showing an
early development of
several of the arts, but usually
~~commonly~~ without with no
way to establish the
~~regular~~ ~~chronology~~
age or even the relative antiquity
of the various types -

Plant Lore.

Plants are stationary organisms so that when plants were adopted by primitive man a settled existence was also assumed.

Plant Lore

The straight-haired short-headed people of eastern Asia resemble the inhabitants of America. The American aborigines may be considered as an out-growth from Eastern Asia, or the Malay races may be a primitive derivation from America. In this connection it may be significant that the Malay region is now known to have had a primitive population of black wavy-haired people.

Plant Lore

The straight-haired short-headed
people of eastern Asia resemble
the inhabitants of America.
Either the American aborigines
may be ~~considered~~ as an
outgrowth from eastern Asia,
or as ~~as~~ the ~~as~~ ^{as} ~~oriental~~
^{may be considered}
Malay races. ~~the~~ ~~Others~~
may ~~have~~ be a primitive
derivation from America.
~~It may be~~ In this
~~the~~ ~~presence~~ of negroes
A previous ~~of~~ ~~occup~~
connection ~~it~~ may be
significant that the
~~or~~ Malay region ~~is~~ is now
~~known to~~ ~~have~~
had a primitive population
of black ~~any~~ ~~type~~

Before we may hope to understand civilization in a practical way, so as to think about it constructively, we must learn to see it as a

Civilization is a plant product, not only in the sense that our lives and those of our domestic animals must be supported by plant food, but in another ~~but~~ equally important sense, that the ways of living with the plants and caring for them have brought us to the development of civilization and still are required for the existence of our race and for the further development of the abilities that civilization makes manifest. The highest product of civilization is the deliberate consciousness of cause and effect which is the underlying principle of scientific progress. ^

^ On that basis civilization would be a dead issue as soon as the formula had been found, but the human mind still is credulous enough to be beguiled by the philosophers. Plato proposed to exclude poets from his ideal republic, ^{and} it now seems equally desirable to exclude philosophers, because they expose us to the same danger of being so intent on words, that a formula is taken for a fact.

In order to apply the principle of causality to problems of human welfare, the light of consciousness must now be directed to a scientific understanding of the earlier stages of human development.

Many books on civilization are filled with abstract arguments, as though human progress had been generated by logical deductions.

A clear understanding of the nature of civilization is needed as never before. The many changes that are being made in the conditions of life through applications of physical and chemical sciences constitute a demand for essential knowledge regarding our human life, at the risk of a rapid extinction of our race, as apparently occurred with other races in the past when the stage of urbanism was reached, as at Athens and Rome. All of the farm population of Attica was withdrawn to the city by Pericles and the city was occupied by the Macedonians only years later.

The ancient civilizations lacked the science of Biology, which now has advanced to the stage of practical application. But biology must keep pace with the other sciences in furnishing the knowledge that is necessary for practical judgment to be exercised in guiding our racial interests.

A clear understanding of the nature of civilization is needed as never before, ^{the} ~~with~~ many changes that are ^{being} ~~made~~ in the conditions of life through applications of physical and chemical sciences, ^{But -} ~~biology~~ ^{furnishing} must keep pace with the other sciences in the knowledge that is necessary for practical judgment to be exercised in ~~the~~ guiding our racial interests.

constitute a demand for essential knowledge regarding our human life, which it are calling for knowledge and adjustment

COPIED
OCT 1

the risk of ~~extinction~~ a rapid extinction of our race, as apparently has occurred at the culmination with other races in the past, when the stage of urbanism was reached, ~~the~~ ^{the} science of biology was as old as Athens and Rome. all of the farm population of Attica was drawn to

city in the life time of
by Pericles, and the city
was occupied by the
Macedonians only - years
later.

The ancient civilization
lacked the science of Biology,
from which ~~we~~ now have
advanced to the ~~for~~ stage
of practical application.

Plant lore (Trans-Pacific)

should arrive and take up this question

If the proverbial martian came in, with no prejudice or prepossession of the antiquity of Asia, how would he approach the study of the problem. Greater antiquity of domesticated plants in America might seem to settle the question.

So many similarities have been found that it is difficult to resist the idea of common origin. Notwithstanding the lack of any definite indication of communication between the two hemispheres endless conjectures have been made and elaborated. Numerous books have been written to show that the ancient Egyptians, Phoenecians, Chinese, Arabs or lost tribes of Israel migrated and colonized or at least were shipwrecked in America and brought civilization with them.

A group of British archaeologists has contributed this effort to the present day, a large and very learned book, entitled "The Children of the Sun", was published in 1916 (?) and is packed full of arguments to show that the ancient Egyptians were responsible, or at least that the Egyptian influence extended eastward across the Pacific.

Quote

So much nonsense has been written about Asiatic introductions that an inhibitory complex has been established in the minds of many, ~~denying~~ all contacts across the Pacific. ~~do not consider the possibility of contacts in the~~ Going or coming is the same to them. Nothing doing across the Pacific. Nothing but a check on the bank of certainty would receive any consideration.

Not merely a casual proposal to turn the question around, but good biological reasons for doing so, if it is possible to escape from the prepossession of antiquity in Eastern Hemisphere.

*finding none of the Asiatic or old
Hered introductions substantiated they
are ready to deny*

after introduction had introduced,

Domestication of medicinal plants and fish-poisons
ayahuasca, Piptadenia, cubey, Lonchocarpus.

Gradual improvement of plants through unconscious selection, indicates long period of development to reach the state of becoming seedless, especially with plants that are grown for their fruits. Seedless varieties of peach palm but not of dates. No effort of conscious selection to be assumed, to hasten the development of seedlessness.

In the case of peach palm propagation from cuttings would be much more difficult than propagation from seed, on account of the very spiny trunks, leaf-sheaths and petioles that make these palms very difficult to handle. The case in this respect is similar to dates, which also are difficult to handle on account of spines on the petioles, though the spines are much fewer. Date varieties are propagated from cuttings, but no seedless varieties have developed.

Seedless fruits are produced, for lack of fertilization

A tendency to seedlessness may be seen, in the dates as ~~seedless fruits~~ without date are sometimes produced on inflorescences that are not pollinated

Little doubt is entertained that the northmen reached America by way of Iceland and Greenland in the tenth (?) century, but they were so deeply immersed in their own quarrel~~ing~~ with each other that the discovery of new land in the west made little impression on their minds, ^{and the news of their discoveries did not spread} That such knowledge could be lost and remain buried for a thousand years is as remarkable as the fact itself. Also it is significant that the single plant observation of the finding of the wild grapes serves better than anything else to authenticate the record, and to show the range of the Norse exploration.

into
Hunt
pl.

After a sufficiently ~~2~~
advanced stage of civilization
had been reached, it became
possible works could be
constructed that would
testify to the exis 111
afford lasting evidences
of primitive man's
~~existence~~ of the exis

Plant Lore

Look over Peruvian MS

" " Maya MS
in MS Drawer

" " Study of Dead
civilizations

Look over Peten Photos

" " Mille "

Plant Lore

Indicates 3 use as primary plant
in north Europe

Korne - was (ye)

in 14th Century

accord. to Regel, Karl

Mittelniederdeutsches

Gothaer Arzneibuch

Published 1893. Review

and list of plants in 8.

Gartenflora. 1879

Photostat copy made
930

Plant Loe

Maru, god of war in
New Zealand, and
connected with the
planet Mars.



Plant Lore

Plant Lore

Most of the theories apply
to advanced stages than
the rather the primitive state
unless have not been the rule

had advanced

After civilization had advanced
far enough ~~in the domain of~~ in
social organization and the
constructive arts and in
social organization of other
large-scale

States, railroads and other owners to make possible the consolidation of the Federal and other holdings. 7. Provision for grants of land to the States where this is desirable to round out existing State holdings or otherwise to meet special local needs. 8. The establishment of authority and procedures to dispose of lands by sale to private individuals and companies where, after careful study, it is determined that this is the best practical means of promoting the beneficial use of the property...9. The transfer of the jurisdiction of the use of public ranges to the Department of Agriculture, where there is a corps of men trained and experienced in practical range administration... There are in the several bureaus of the Department of Agriculture experts in grasses and other forage plants, soils, animal husbandry and range management..."

Wool
Supplies

The Statist (London) for April 5 says: "The feature of the industrial world to-day is the general depression in raw material values. Wool has suffered a steady decline for nearly two years, and to-day is around pre-war rates for all qualities. Usually in March, five-sixths of the Cape clip, three-quarters of the New Zealand, almost three-quarters of the Australian and four-fifths of the South American clips have been sold. To-day not one of these producing countries has disposed of the above average proportions. South America is probably nearest to its usual standard, growers there having met the market through most of the season. South Africa comes next, only 300,000 bales remaining out of a clip of 900,000. Australia and New Zealand are well behind schedule. In both countries, offerings at auctions have been reduced, from as far back as last October, in the hope of rising prices. The New Zealand selling season will not be extended after the middle of April, but Australian sales may spread over what is usually the blank period of July. In any case, more wool is being sent to the London auctions, because it can not find a place in the Australasian catalogues as early as desired. The Australian sellers would now like London to work in harmony with them in their policy of restriction..."

Section 3

Department
of Agriculture

An editorial in Journal of Home Economics for May says: "That the success of the Government's efforts to protect the consuming public depends on the intelligent cooperation of that public, was the point brought out in a recent radio talk by W.R.M. Wharton, chief of the eastern district of the Food, Drug, and Insecticide Administration. He even suggested that to drive home this responsibility in regard to pure foods and drugs the housewives of the country form 'read the label' committees in their clubs...Mr. Wharton's central ideal will meet the hearty approval of home economists interested in the education as well as the protection of the consumer, and his suggestion may prove helpful in schools and in club and study groups."

DAILY DIGEST

Prepared in the Press Service, Office of Information, United States Department of Agriculture, for the purpose of presenting all shades of opinion as reflected in the press on matters affecting agriculture, particularly in its economic aspects. Approval or disapproval of views and opinions quoted is expressly disclaimed. The intent is to reflect the news of importance.

Vol. XXXVII, No. 30

Section 1

May 5, 1930.

FRUIT FLY FUNDS

Chairman Wood of the House appropriations committee announced May 3 that he would call on Secretary of Agriculture Hyde to explain his request for an additional \$6,902,000 to fight the Mediterranean fruit fly in Florida. (Press, May 4.)

THE TARIFF BILL

The House May 3 continued consideration of the conference report on the tariff bill, rejecting the Senate debenture amendment, 231 to 161, and the Senate flexible provision repealing presidential power to change duties fixed by Congress, 236 to 154. (Press, May 4.)

ECONOMISTS ASK TARIFF VETO

The Associated Press dispatch to-day reports that more than 1,000 economists, representing 179 colleges throughout the country, joined in a letter to President Hoover and the Congress yesterday protesting against enactment of the tariff bill and asking that it be vetoed if passed.

THE STOCK MARKET

The New York Times of May 4 says: "With volatile issues plunging in a fresh torrent of liquidation, the stock market was rocked yesterday by the heaviest Saturday trading in history. During the two hours of trading on the New York Stock Exchange, 4,867,530 shares changed hands. The accompanying reaction was the most severe since Dec. 20, 1929, as gauged by the average prices of representative stocks..."

GERMAN FARMERS TO TOWNS

An Associated Press dispatch from Berlin to-day says: "The lure of the big city is as potent here as elsewhere, and the city fathers are greatly concerned about it. Berlin's population increased by 80,000 last year through immigration of people from the country, thus making the metropolis a city of almost 5,000,000. The influx exceeded by 20,000 last year's emigration from all of Germany to foreign countries. The movement persists, too, despite the fact that prospects of finding a job in Berlin are meager. The housing commission is much troubled about it, because it is simply impossible to find quarters for all these new Berliners..."

AUSTRIAN GRAIN TARIFFS

Facilities & easy life and that hours of work have been provided in the cities but not in the country.
A Vienna dispatch yesterday says: "The fall in grain prices is providing a fresh cause for uneasiness in the tariff policies of Central Europe. In Austria, where the index for wholesale prices as a whole stands at 121, the wheat index is 85 to 88. There is widespread demand for revision or notice in the matter for commercial treaties with agrarian countries..."

New Measures (Urbanism)

The Roman world was
urbanized as ours
is now being urbanized,
and the result
was a universal
disaster that completely
wrecked the Roman
empire

Plant Lore

One of the results of modern scientific interest and investigation is the knowledge of the gradual advance of mankind from primitive savagery and barbarism to the high development and combination of many abilities and arts into what we now know as civilization. A scientific consciousness of civilization is being attained. Special sciences are being devoted to studies of its different aspects, and there is an acute interest to know if possible the conditions, the people and the place where the first steps of progress were taken.

Many sciences are now being devoted to the study of different aspects.

of civilization

Plant Lore (Root-crops)

Guppy has discussed the distribution of cultivated plants in the Pacific Islands but takes little account of the sweet potato which undoubtedly was widely distributed and on many of the islands was very important. But Guppy includes *Pachyrrhizus* and recognizes its American origin.

"Although most of the early food-plants hail from the Old World, the home of *Pachyrrhizus* is in America. One may indeed wonder how a plant with such a history ever reached the Western Pacific. It seems to be generally distributed in this part of the ocean, having been recorded from New Caledonia, the New Hebrides, Fiji, Tonga, and Samoa. Although its edible roots are only used in times of scarcity, the plant grows wild all over Fiji, being especially frequent in the "talasinga" plains. Though I searched diligently, it never presented me with its seed. In Tonga, according to Graeffe (as quoted by Reinecke) the plant is much employed in preparing the land for yam-cultivation, since it restrains the growth of weeds and keeps the soil moist."

(Observations of a Naturalist in The Pacific Between 1896 and 1899, by H. B. Guppy, Volume II, London, Macmillan & Co., Ltd., New York, 1906 - Pre-Polynesian Food-Plants, Page 413)

Quichua quilli, a border, as anything attached, tied or sewed to something else. Also used as adjective relating to anything attached or serving as a continuation of something else. quillini a verb meaning to sew things together. These words possibly cognates of Kaylla meaning shore, rim, or border of a garment, also Kaylla as adverb close by, together, or part of another thing. Compounded in several verbs meaning to join, unite, hold together. Also a verb Kaylluni meaning to hem or embroider or sew ornaments on cloth, ^{also} suggests Koyllur a star, which could ^{even} have ~~this~~ such a connection.

Kolo = birdline Hawaii
paleu = " Samoa
Kuru = Great part in Baumster

china = tina (mother)
Kuri dog = in Baumster sug ^{of} can

Dist. Sphema v. tana,
considered superior to Alcasia

Dioscorea ^{2 or 3 sp} uvr

Cordyline

Facca

Sagus

Cupras

in fig. in
for obtaining more
of the roots

Zingiber
"Obata" (Obuithan)

Curcuma
cogo

Musa = Uudi

Antrocarpus =

used like
root crops

also fermenter in
pits

Plant

Age of root-crops. Starchy
roots of several aroids
used in Fiji and other
Taro (~~Colocasia~~)

islands of the Western
Pacific - The following Fiji names
given by Seaman
Colocasia = Dalo (= Taro + Kalo)

Alocasia = Via mila, via Soga,
via sori, ~~dia~~ and dranu (= api n
ape, Hanu)

Amorphophallus daiga (Thave, Tewa, Tahy)

Plant Use

Matti as name of
Ficus tinctoria

fig in Tahiti

(Solander) accordg

to Peerman Fl Vit

also Masi as fig name
in Fiji

a fig used for bark cloth in Tahiti
also New Hebrides

Plant Line

Black cloth said to be
Made ^{only} from Brommelia
~~only~~ in Hawaiian group,
but in Tahiti Society
group also from Aoa
(= Ficus) and for the Breeding
The Aoa considered also
as a sacred tree. Cloth
this was largely used with Tahiti
work for cloth ahu instead
of tapa

Resort to Ficus
obliqua (Baker) in Fiji
when Broussonet's
plantations fail

Ficus scabra called
Ai Masi in Fiji =
Seeman thinks derived
from verb masi - a meaning
to scour, the leaves being
used as sand paper by natives.
Would seem that derivation
might be other way

Plant Life

Maya cities have
endless numbers of
underground storage
pits — root-cellars
or silos — rather than corn-cribs
not known how
they were used. but
system of storage highly
specialized — Possible use
of sapodilla and raman
tree —

Plant Core

The name allere
recorded by Cheeseman
on Rarotonga for
Grewia, a tiliaceous
tree, ~~which a group~~
~~also~~ related to Malvaceae
and also characterized
by fibrous bark

Tracing Civilization Through Plants

Plant Lore of Civilization

More kinds of evidence are available to bear upon the study of civilization than have been used in the past.

The assumption of a pastoral period as a first stage in the development of agriculture is misleading. Pastoral pursuits are a side-branch of agriculture, not the original root. *is the main plow* The domestication of plants must come first, to give a settled existence. Pastoral people are occupied with the care of their herds and move about to find pasture, so that

but the conditions of pastoral life do not favor the development

Animals also may be domesticated by a settled people, but not plants by a moving people.

The Agricultural Invasion

The British conquest of India led to the discovery of the ancient Sanskrit as related to the languages of Europe, a cognate of Greek, Latin, and German. For a time it was believed that the European races came from Central Asia, on account of the relationships with Sanskrit. The Celtic and Slavonic languages at first were not included in the Indo-Germanic series, but later were admitted. The present diversities of the Aryan tongues no doubt are comparable to those that have developed among the Romance languages since the destruction of the Roman empire, but, ^{requiring,} of course, a vastly longer period to be reckoned in thousands of years. A Roman conquest of western Europe explains the existence of the Romance languages, so it is to be inferred that the primitive "Aryans" over-ran and dominated Europe and western Asia so completely as to establish their language. This invasion must have occurred very far back in the prehistoric period, probably at least 5,000 years before the Christian Era. Aryan invasion may coincide with the Neolithic Age.

(The linguistic relationship extended by Bopp to the Pacific Islands) ?

Agriculture

The Oceanic Civilization

Wherever it came from, the Oceanic civilization has an obvious and admitted cultural unity, notwithstanding its amazingly wide distribution. From Hawaii and Easter Island to Madagascar the same language is found.

is Agriculture and
The Genesis of the Megalithic Art

The most permanent and striking feature of the archaic civilization that has come down to us is its stonework and especially the moving and carving of huge rocks, ^{massive} required the combined efforts of large numbers of people.

Megalithic stonework is the striking and indubitable evidence that prehistoric civilizations existed in so many parts of the world, not only in the regions of traditional antiquity in the mediterranean countries, but in many remote regions, Central America, South America, the Pacific Islands, South Africa and Western Europe to the British Islands are all included in the belt of megalithic ruins.

The world-wide distribution of such remains has led some writers to infer a general human instinct for working with large stones has manifested itself independently in many different regions, but the alternative of a general megalithic culture has also to be considered.

Setting up monuments is our traditional idea of stonework, but also the question may be raised, also useful for fortifications.

was the original object?
In which of the regions are there natural conditions that afford ~~a~~ practical reasons for developing a megalithic art?

*Sumerians as pre-Sumerians or
rock men people - found rocks &*

The spreading wave of civilization takes up and bears along the capable races, or rather the races take up the civilization and carry it forward. Where the differences of culture are great, and a complete domination is established, the language, as well as the culture, of the more civilized race is imposed, which affords a record of great permanence.

pre-historic wireless

Regie (Prehistoric) Greece, Boeotia.

And in mycenaean days, as today, there was no Lake Copais. The mouldering dikes and barriers that still protrude from the plain are the work of these prehistoric folk, mighty engineering feats for those early days. They hemmed in the rivers of the plain and guided them whither they wished to the natural underground exits that still partly drain the lake to the sea."

Stanley, Boeotia
Hunt Institute for Botanical Documentation

The Inca Polity

The system of government and social organization among the ancient Peruvians was on such different lines from any that was ~~used~~ developed among European peoples as not to fit readily into any of our accepted classifications, and the names that we have for different systems of government do not apply very well. Some writers have viewed the Inca system as an absolute monarchy or a theocracy, since the sovereign was held in religious veneration, while others have held the Inca polity was the most complete socialism that has ever existed, because there was no private ownership of land and the entire population had the same rights in the means of subsistence. ^{Inca} As in China and other Oriental countries, the ~~sovereign~~ ^{Inca} deemed himself responsible for the welfare of the people. The Inca was a sun-god and was supposed to have a magical control of the movements of the "Day Star", set up to mark the progress of suns. The annual progress of the sun through the heavens was recorded by the shadows of stone pillars called "Intihuatana" that is, pitching-parts of the sun.

The lack of a primitive agricultural background for the history of our own race is shown by the paucity of farm words in our north-European languages. The only word that has a sentimental attachment behind it is home, but this we have now degraded to urban uses. Cities claim blandly to have so many thousand homes, meaning houses or apartments or quarters of any sort that people live in. But the original meaning of home or holm was a farm, a piece of land with a house and a family. Necessary now to say a farm home in order to convey the essential idea.

Look up wold - Is it the same as wood? Or does it connect with pastoral pursuits?

I

I-I

Plant Lore

Plant Equipment of Primitive Civilization.

Root crops and bark cloth and fish poisons may represent more prominent features in early stages of development before the cereal crops were domesticated. The root-crops have the great advantage, for very primitive people of affording more continuous supplies of food in the same district, so that tendencies to settled existence would be developed gradually.

Derivation of agriculture through root-crops, assumes a previous domestication of fire. Most of the root-crops are not edible in the raw state and several of them are poisonous before cooking, since they contain poisonous substances which require heat to disintegrate.

Both root crops and bark cloth transpacific, with names and uses. Sweet potato names and names of mahagua names of amate.

See about fish-poisons in Polynesia, Borneo, New Guinea, Malaysia, etc.

Plant Equipment of Primitive Civilization

Root crops and bark cloth may represent more prominent features in early stages of development, ^{and fish poisons} before the cereal crops were introduced. Both root crops and bark cloth transpacific, with names and uses. Sweet potato names and names of mahagua names of amate.

See about fish-poisons in Polynesia,
Borneo, New Guinea, Malaysia etc.

avoid. The west-coast have the great advantage, for
of primitive people of affording a more extensive
supply of food in the same district, so that a
balance to better ventura result
developed gradually.
Domestication of agriculture through
west-coast ~~the~~ assumes a previous
domestication of fire. Most of the
west-coast are based only in cooked
not edible in the last stage before
and several of them ~~are~~ ^{are} ~~concerned~~ ^{concerned} ~~the~~ ^{the}
prisoners, and ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~ ^{as} ~~that~~ ^{that} ~~which~~ ^{which} ~~are~~ ^{are} ~~not~~ ^{not} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~but~~ ^{but} ~~require~~ ^{require} ~~heat~~ ^{heat} ~~to~~ ^{to} ~~be~~ ^{be} ~~used~~ ^{used} ~~for~~ ^{for} ~~food~~ ^{food}
~~as~~

Plant Lore

Agriculture Originated in America.

The plants tell us this very definitely. Do not tell us so definitely that agriculture did not have originate also in Asia, as a separate development. The separate origin is the question to be studied in the future, rather than the other.

Agriculture in America unitary and continuous.

Corn all over the continent -

Secondary centers of domestication in Central America and Mexico -


Can same line of interpretation be applied to Pacific Islands and Eastern Hemisphere as another of American Agriculture?

Follow with continuity of Agriculture in America? Then with continuity of Agriculture in Pacific Islands and in Asiatic Tropics.

Surface - Agriculture in America
unitary and continuous
corn all over the
continent - Can
secondary centers of
Americanization in Central
America and Mexico
Can same line of
interpretation be applied
to Pacific Islands and
Eastern Hemisphere as rather
to American agriculture?
Follow with continuity of agriculture in America?

Plant Lore

Agriculture Originate in America

The plants tell us ~~that~~
very definitely. Do 
tell us so definitely that
agriculture did not have
originate also in
~~Asia~~ or have another
separate and independent
origin as a separate

development - The
separate origin is the question
to be studied in the future,
rather than the other.

Plant Lore

What could primitive man do that would make a permanent mark on nature? Where were such marks made? Where were the first marks made? In the course of many generations he could change the characters of plants, could make plants seedless.

Centers of Domestication.

Peru the Primary Center.

Trans-Pacific Man.

(See article on Science)

Mongolian race has a trans-Pacific or circum-Pacific distribution --- including Madagascar. Also Madagascar Negroid and Abyssinia?

Peach Palm and Date Palm.

Both unknown in the wild state. Quote spruce. Suggest African origin as indicated by palm cult in Babylonia, but not in Egypt, reversing the usual argument. Canyons of Northern Sahara suitable places analogous to canyons of Southwest where Washingtonia palms grow.

Isaac
Plant Lore

What could primitive man
do that would make a
permanent mark on
nature? Where were
such marks made? Where
were the first marks made?
In the course of many generations he could change
the character of plants, could make plants useful.
Centers of Domestication.

The Penn the Prime Center.

Trans-Pacific Man.
(see article in Science -)

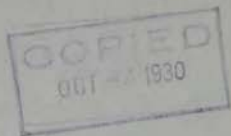
Mongolian race has a trans-
~~ore~~ Pacific or circum-Pacific

Distribution — include
Madagascar — Also Madagascar
Mauritius + Abyssinia?

The ~~Date~~ Peach Palm

~~The~~ Peach Palm and Date Palm

Both unknown in the wild
state. Quote Spruce: suggest
African origin as indicated by
palm cult in Babylonia,
but not in Egypt reversing
the usual assignment.
Canyons of Northern Sahara
suitable places analogous
to those of canyons of
southwest where Washington
palms grow



Plant Lore

A new requirement of an understanding of civilization is being felt as a result of the rapid changes that are being worked by many applications of science. Place in our present system.

are
Laws of civilization/being sought, like laws of evolution, apparently on the assumption ^{that} an underlying agency or mechanism will be found which keeps progress going and insures it against destruction. Such notions are contrary to all that we know about nature not only individuals but species become extinct. The highest civilization of antiquity fell completely to decay, and the advanced races perished. There is nothing to keep us alive as a race or as a civilization unless we can learn the requirement of existence and how to observe them continuously, from generation to generation. Undulatory motion idea — not a real motion of anything. Successful types continue their development.

to keep us alive as a race or as a type of
unless we can learn the requirements of
our existence and know the obstacles
of our environment, from generation to generation.

Undoubtedly motion
idea—not a real
motion of anything.
Successful types continue
their development

Plant Lore

COPIED
OCT 19 1907

a new requirement of an
understanding of being
evolution is being
felt as a result
of the many applications
of the rapid changes
that are being wrought
by many applications of science
place in our
present system.

Laws of evolution (see clip)

COPIED
OCT 19 1907

Agriculture & Human Progress.

Agriculture has many biological relations to the developments of the human race that have not been appreciated. Means more people, greater opportunities for selections. Explains superiority of agricultural races over others. Selection eventually reversed under urban conditions and human quality deteriorates. In other words, the development of agriculture, the use of cultivated plants, has carried the human race through two stages of selection (and) positive and gradually advancing, and a later stage of adverse selection and sudden decline.

Agrie & Human Progress. The
has many biological problems in the
development of the human race that
agrees with the macro people
great opportunities for selection
programs superior agricultural
race on other selection.
eventually reversed under urban
conditions and human quality
deteriorates. In other words,

selection of man of quality

ag. the development
of agriculture has the
use of cultivated plants -
has developed ¹⁹³⁰ ~~ensured~~ the
human race through two
stages of selection a positive
and advance gradually
advancing and a later stage
of sudden adverse ~~the~~ selection and then declining

Geometric superstitions (To put with the rain.)

Zuni's used downy feathers to attract clouds. as part of monomancy, rain-making.

Cushing, F. H., Zuni Folk Tales, p. 420
"Beings of Water" say to the Cocks:

"Behold, no plumes are set about our borders!

Now, therefore, pay to them of thy feathers - for
floating plumes from under thy wings - and set them
close over us, that seen in our depths from
the sky, they will lure the Beloved of the
Clouds, with their rain-laden breaths -

Plant Lore

Present as study of civilization. To know the nature, genesis and race and background of primitive civilization.

Too much obsessed with cities which certainly did not exist before civilization.

World of Genesis already old when Bible was written.

Primitive people have used endless expedients for controlling the weather, feathers to suggest clouds, jargons to suggest streams & water. Primitive religions for inducing rain. Not like

Plant Lore (Cassava)

A relatively late introduction of cassava into Mexico, subsequent to the use of maize and of the sweet potato may be inferred from the compound name guacamote which is applied to cassava in Mexico. The meaning of this name is obvious, as gua is a tortilla and camote is a sweet potato. Calling the cassava a tortilla sweet-poto is entirely appropriate as the roots are much like sweet potatoes and are made into flat cakes like tortillas. The making of these cassava cakes extends over tropical America and ~~is~~ ^{this method of preparation is} not applied to any other root crop.

Appreciation of Plants

Living in a new country whose possibilities ^{are} largely undeveloped, much of it definitely beyond the range of European plants. Hence our developing appreciation of the value of plants.

Rather slow progress would seem to have been made by our modern world toward an adequate appreciation of the value of economic plants. The idea of domesticating a new plant comes slowly and unwillingly. Even with a useful species directly before us, it does not occur to us that planting may be necessary or desirable. The Hevea rubber tree was not domesticated in Brazil but in the East Indies. The sugar maple in Vermont has not been domesticated though it has become valuable. Sugar maples often have been planted as shade trees, but planting for sugar has hardly been thought of.

See our Burbank article for reflections on appreciation of plants.

Modern man loses much in the way of satisfactions of raising good crops and ^{is} ~~using them~~ ^{the farm products} in the family. ~~having them used properly~~

Man as an animal is very ancient.

Civilization no less than the organic powers of mankind has developed with "excessive slowness", through vast periods of time. Period of permanent traces reached only recently in comparison with vast previous epochs. Civilization as an undulatory motion. As a recent writer has concluded, "there is a general advance intellectually and ethically, in undulatory fashion, the scepter passing from one race to another as reason in each in turn abdicates its throne, to pass into a trough of hedonism and skepticism." In other words, the more advanced races teach themselves bad habits that finally work to their destruction. The advance position is abdicated, falls to another group "better fitted to carry aloft the torch of progress". Thus far in the history of the world such rises and falls of civilizations have been made in nearly complete unconsciousness of the essential causes or controls of progress. Only a few nations have risen, like the Greeks and Romans, to the point of deliberate consideration of such facts.

Our present civilization is only now reaching the stage of consciousness

The Roman philosophers and statesmen of the Age of Augustus saw very clearly that the Romans had doomed themselves to extinction, but the system continued for a few centuries of gradual decay.

barbarians

Civilization is a Race Product

Principal emphasis on race by some writers and carried to absurd *extremes*
Nordic race ^{their peculiar} may have ~~many~~ virtues, but no special virtue from the stand-
point of civilization. The racial ability did not produce civilization
directly. Civilization a process of accumulation of knowledge and ex-
perience. Conditions of accumulation necessary.....

Hence begins to be looked for among races that had the necessary
social system for developing civilization. *Life living as
separate families on the land, the
essential characteristic of the advance toward
civilization*

Farm Life the Background of Culture

How unconscious we have been and still are, regarding the nature of civilization is indicated by the fact that we lack any distinctive word for the essential underlying fact. Agriculture is the tillage of land, and farming is to get revenue from land, but neither word has any original depth of ideal or social implication. There is no implication in the word farmer that he is to live with his family upon the land as a separate social unit nor have we learned definitely to think of this condition of existence of separate farm families as the essential basis of developing civilization, equally as essential as the cellular structure of plant and animal tissue for the building of specialized complicated bodies with specialized functions and abilities. All life from the egg. All civilization from the farm home. Where was the genesis of the farm home?

*Living in separate families upon the
land - choripedia state.*

Plant Lore

If civilization is to be considered a matter of race, what race was primarily responsible?

The plants seem to tell us that agriculture in America was antecede^{ent}d to agriculture in Asia, that the American food plants had been demonstrated for longer periods, as shown by greater divergence from the nearest related wild types. _____

The stage of seedlessness has been reached in many of the American plants, as a result of long cultivation from cuttings or roots.

Significance of maize Gods may point to extension of maize culture from limited center. Highest specialized plant, ^{1 a} ~~if~~ natural ^{plant} at all undoubtedly was limited to small area. Would come to other regions as a wonderful plant easily impressing the superstitious imaginations like cult of the horse of Cortez developed by natives. Cult least likely to be established in original home of maize. _____

We do not address ourselves properly to the future of civilization without knowing the past, not that we would return to the past, or turn away from it, but that we should appreciate and set a truer value on what we have attained. _____

Theories of Civilization

Many writers have propounded general theories to explain the rise and decline of civilization. Climates, soils, locations convenient for commerce, metals, mines mechanic arts, weapons and shipbuilding and maritime military prowess, Boat-building and seamanship are ^{among} ~~among~~ the factors that have appeared potent.

To know the background of our civilization, how primitive man developed from naked savagery and bare-handed barbarism, and the stages that he passed through ^{To our} ~~from~~ present stage of elaborate equipment of life are matters of increasing interest and practical concern.

The emergence of the race to the plane of consciousness, is a slow and painful process. It calls for knowledge and adjustment of both the external facts and ^{the} internal reactions of our human nature. An understanding of the development of civilization is necessary for practical judgment in any of the long range interests of humanity. Without such a background of our human existence, we can have no just conception of our place in nature or of the stage of progress which has been attained.

What sort of marks could primitive man make on the world that could show where he began to practice agriculture? This question may ^{be} ~~be~~ hopeless from the standpoint of artifacts or monuments which could mean little till civilization had advanced so far that objects can be dated or at least placed in a definite succession. This often is possible for the successive artifacts of a single region but as yet there is no way to connect such series from different countries or from different continents

Root Crops and Bark Cloth

The age of root crops and bark-cloth before the age of cereals and textiles. Represented in the Pacific Islands. Amate, Amatl writing on bark cloth. Also a fig tree called Mati in Polynesia, Rarotonga, Cheeseman. Natural fiber of palm sheaths most durable material of Maya books. One of the most important bark-cloth trees found in both hemispheres and has similar names. Also the names of other bark cloth trees and fiber plants may have been derived from the name that connects with America.

Root crops and starchy fruits as bread fruits and bananas can be preserved as ensilage ⁱⁿ underground pits and storehouses.

"As he dwells with men and follows the history of races through their successive stages of barbarism, fetichism, inquiry, reason and intellectual decrepitude, he notes that there is a general advance intellectually and ethically, in undulatory fashion, the scepter passing from one race to another as reason in each in turn abdicates its throne, to pass into a trough of hedonism and skepticism.

"Geology and biology now come to his aid and reveal to him a similar progress in the organic world from insignificant beginnings in Pre-Cambrian time to the highest organic structures and mentality, nevertheless in undulatory fashion, with the scepter passing from one animal and plant race or group to another better fitted to carry aloft the torch of progress. In all, however, the advance appears to be of the nature of an imposed gift.

"Several other points impress him, namely, the tendency in man to specialization in scientific study; the tendency in each department of scientific research to reveal an underlying unity of activity, or a close interrelatedness of the objects of special study, nevertheless indicating, in each case, a still deeper underlying unity as yet undiscovered specifically and perceived only 'as in a glass darkly'; the peculiar separate rather than disparate powers of the objective and subjective (subliminal) mental activities in organisms; also the violent and determined opposition manifested generally to progress by organisms, the general opposition exhibited consciously to progress by man himself (considered as a whole) being well expressed in the epigrammatic line of Plautus, 'Homo homini lupus'. With all, however, he observes that this persistent opposition has never been able to block progress, although it has retarded it for short periods. History indicates also to the Observer that true advance comes only through cooperation, and that the latter stage can come only when man throws off 'the clog of individuality and remembers that he has grand race connections.'"

("Science", Vol. LXXII, No. 1861, Friday, August 29, 1930, Pp 206 and 207)

Ch. & L.

Stone Country to
migrate a sun-god.

The Neolithic people were
past-masters in stonework -
Megalithic structures and
delicate dishes.

summers brought in rocks for
special purposes huge stones for
their doors

Plant Lore

What and for belly?

Labyrinth cognate?

Labyrin as double goe
accord to Baile

Plant Lore

The present has little
meaning or satisfaction
without the past =

CIVILIZATION'S MAKERS

From the Brooklyn Eagle.

Who are the makers or remakers or molders of civilization? The list of 'capitalists, financiers, captains of industry' made up by James W. Gerard was hotly traversed by Watson Davis of Science Service, who would star Edison, Orville Wright, Mme. Curie, Marconi and DeForest, along with other great inventors, electricians, chemists, entomologists and bacteriologists. The issue is interesting. Mr. Davis conceded that corporation executives may "rule our financial and even our political destinies." He denied that they mold civilization.

What is clear to the philosophical thinker is that in very large measure the Gerard men are only the exploiters of the discoveries of the men on the Davis list. For themselves they have only developed new financial combinations and new forms of commercial organization. They have won power and fame as well as large fortunes. No politician can afford to ignore their influence in any part of America. In many instances they have been large givers to philanthropy, incidentally stimulating discoveries. In many instances they have become patrons of the fine arts. That their work has made for what is called national prosperity most of us are inclined to acknowledge.

The Davis group has contributed immensely to human knowledge as to cheap production of necessities and comforts. In a hundred years such knowledge has had greater growth than in 2,000 preceding years. It may be true, as Haldane argues in the September Harper's, that the Sumerians of 3500 B. C. had better drainage systems than many English cottages enjoy today; that they had art and architectural standards not inferior to our own, but they had no radios, no telephones, no cheap automobiles, and no understanding of even the first principles of bacteriology. Our age is so far ahead of all past ages in the checking of disease and the lengthening of the life span that no comparison is possible and no comparison is ever attempted. Yet there are doubters who insist that the struggle of science against the law of the survival of the fittest is of questionable value to the human race.

Also there are skeptics who look at the Gerard group and the Davis group and ask what either has done outside the realm of pure materialism, and query, "What is it all about?" Life in simple terms was not unhappy for the Athenians of the Golden Age of Pericles. Life in relatively simple terms was not unhappy for Englishmen of the Elizabethan age. And we have now no Socrates, no Plato, no Aristotle, no Shakespeare and no Francis Bacon. As the author of "Night Thoughts" put it:

Knowledge and Wisdom, far from being one,
Have oftentimes no connection; Knowledge
dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.

These skeptics are almost inclined to suggest a ten-year moratorium on knowledge to let wisdom catch up. Between the Montagues of capital and the Capulets of science they have no choice. "A plague o' both your houses!" is their exclamation. But luckily or unluckily the skeptics are so few as to be negligible in the United States of America.

The Origin of Alpine Civilization

"Our knowledge of lacustrine civilization in Switzerland and Wurtemberg has been revolutionized by the stratigraphical observations of Dr. Paul Vouga on L. Neuchatel, and of Dr. Hans Reinerth and Prof. R. R. Schmidt on the Federsee moor. Their results entirely supersede, especially in respect of chronology, the old conclusions based on a study of material dredged up haphazard from the lake bottoms. At several stations on the shores of L. Neuchatel Vouga has distinguished four superimposed settlements which he calls respectively the lower, middle and upper neolithic and the chalcolithic levels.

The neolithic civilization appeared quite fully formed in the lowest level. The first settlers already possessed the domestic animals, practiced agriculture, and clothed themselves in woven fabrics though they did not use clay "spindle-whorls" (which were really beads.) They hunted the local game, including the aurochs and the elk, but they were not addicted to a fish diet. Every possible variety of polished stone celt was already in use and the axes were hafted by means of the horn sleeves of Fig. 122 A-B. Perforated stone axes were not used. For their celts the lower neolithic villagers sought out by preference greenstones such as jadeite and nephrite, and they imported translucent flint for the manufacture of simple blades with unilateral retouching. Round bone points (Fig. 120b), sharpened at either end, were used as arrow-heads. Contrary to the a priori theories the oldest pottery of Western Switzerland was the best. It was grey-black in colour, very thin and well smoothed (Fig. 120,c).

The first lake-dwellers used to paint themselves with red ochre like the Azilians, and wore as ornaments boars' tusks perforated at either end, and bone pendants sometimes engraved (Fig. 120, a). A sinister side of the picture is revealed by amulets made by trepanning the human skull and by the fact that the human bones found at the lowest level had been broken to extract the marrow. So our lake dwellers may have been cannibals!

The lower neolithic pottery is the key to the source of the neolithic elements, of which it is not the least, in Alpine culture. Its technique is quite Danubian and the same fine fabric is met all through north-east Switzerland, on the Lake of Constance, and on the Federsee.".....

"But, as we shall see, the higher elements in the lower neolithic civilization, particularly the fine grey pottery, have no prototypes to the west. The culture of Dullenried and its coarse pottery is much more like that of the middle neolithic at L. Neuchatel than that of the lower. So Reinerth's westerners, whoever they were, cannot have been the authors of the neolithic culture even in Western Switzerland.".....

The Developments on the Western Lakes

"The settlers who founded the lower neolithic settlements on L. Neuchâtel were driven from their villages at the end of the epoch by a flood. After the elapse of some time the old sites were reoccupied and one new station was founded. But civilization had deteriorated. In the middle neolithic levels the proportion of the bones of game to those of the domestic animals had markedly increased, the new pottery is coarse and ornamental like that of the North Mediterranean coast with plastic strips; the old transparent flint was replaced by opaque local varieties. On the other hand, the middle neolithic villagers made or imported wedge-shaped perforated axes and had learnt to improve the horn hafts by trimming (Fig. 122, c). Perhaps the lake-dwellers had taken refuge from the flood upon the mountain slopes and there become mixed with more primitive tribes—Reinherth's "west-folk" —dwelling in caves. The pigmy skeleton from the lake-dwelling of Egozwil may belong to some of these backward survivals. No graves whatever have been found belonging to the lake-dwellers at this or any other period.

Henceforth Western Switzerland is a cultural backwater. The material from the lake-dwellings is valuable because the mud has preserved an unique record of the neolithic arts and crafts, but of arts borrowed from others rather than a peculiar or original creation. No internal progress can be discerned on the Western Lakes. So the upper neolithic people on Lake Neuchâtel acquired simple battle-axes with round butts but no distinct heads. These weapons, however, were introduced by Nordics. They occur in barrows with cremated bones containing very decadent corded ware and copper spirals at Schafflisdorf (C. Zurich). Later on the lake-dwellers imported a few metal objects, but the use of copper and bronze like that of iron began late in the Alpine valleys.".....

("The Dawn of European Civilization" by Vere Gordon Childe, Published by Kegan Paul, Trench, Trubner & Co. Ltd., London, Pages 246-7-8-9-50)

"The Origins of European Culture."

"The Most Ancient East: the Oriental Prelude to European Prehistory. By Prof. V. Gordon Childe. Pp. xiv + 258 + 24 plates. (London: Kegan Paul and Co., Ltd., 1928.) 15s net."

"A new book by Prof. V. Gordon Childe is always welcomed by students, and the volume under notice has special value as it carries the history of European cultures, as described in his "Dawn of European Civilization" (1925), to their origins in the ancient East, for the whole chronology of prehistoric Europe ultimately rests on synchronisms with the historical cultures of Babylonia and Egypt. The book begins with a reconstruction of the culture of the then thickly populated pleasant grass-lands of northern Africa and southern Asia of late palaeolithic times. Firm ground is reached in the description of the culture recently found at Badaria, south of the Fayum. Culturally, the immigrant Badarians were a whole stage removed from the savagery of the Capsian hunters; they had mastered all the arts that are usually termed neolithic, and in addition they were acquainted with copper. The Badarians may have been autochthonous in the Nile valley or somewhat farther east; the modern Hadendoa appear to have relations with this ancient stock. They were the founders of Egyptian agriculture. Later, the first pre-dynastic culture arose in Upper Egypt from this basis and an infiltration of Getulian elements from the west."

"The First Dynasty of Babylon can be fixed at 2196 B.C., but long before this there are written records of kings of various cities that date back to an event termed the Flood, and even earlier. The First Dynasty of Ur dates from before 3000 B.C., and belonging to a period some 500 years earlier are the royal tombs excavated by Mr. C. L. Woolley. Those who have seen his exhibitions in the British Museum will recognise that this very rich and mature civilisation must have had a long history behind it. Gordon Childe discusses the character and affinities of the first and second prediluvial cultures; the former is mainly revealed from excavations at Susa (S.I.) and at al'Ubaid, the latter is that of Susa II. and of other sites."

"As we have the first account in book form of the Badarian culture, so also we have that of the Indus civilisation. We find, thanks to work of Sir John Marshall, on the now impoverished banks of the Indus a brilliant civilisation in touch at once with the prediluvial villages of the Iranian plateau and the nascent city-states of Babylonia, and the Arabian Sea was ploughed by dhows freighted with the stuffs of Sindh consigned to Babylonian river towns. Thus the civilisation of Sindh was ahead of that of Sumer. About 3000 B.C. a catastrophe overtook the cities of the Indus basin. Gordon Childe thinks it is a legitimate deduction that the role of the maritime peoples of Arabia was to act as intermediaries between Egypt, Mesopotamia, and India."

"This book should be of definite interest to the non-specialist reader, as it is pleasantly written, copiously illustrated, and will enable him to place in their historical setting the discoveries that are continually being noticed in the daily Press."

A.C.H."

"Nature" No. 3102, Vol. 123
Saturday, April 13, 1929 pp. 559 & 560.

Hunt Institute for Botanical Documentation

Plant Lore

Trans Pacific similarities not
commoned to plant world,
The word kapue meaning
a goal of fire
~~ashes~~ in Wern. may
appear - he represent
be represented in the
Pacific by apui,
kapui, afu, api, ~~at~~
in Assyria abu, Accada
at, by Sikep ~~pyr~~
pyr and English fair

Plant Lore

Sumerians

Early art in Indus valley also
Rectangular Stamp Seals

terra-cotta figures

Ground plans

" very fine painted pottery which
disappears entirely before the
beginning of the historic period as
we know it. Pots hand
made or on slow wheel

Plant Lore

- p13 red & mottly houses
14 food bowls of limestone
Balsas
(latteron)
pierced ears with "studs"
beads, dressed hair
buried in side with bones
band

Plant Lore (Introduction?)

A higher consciousness of civilization is being attained and a deeper interest developed, though what we mean by civilization is often very indefinite. As yet we are very far from having a complete picture of the many stages of progress that had to be won with great effort and then left behind. To understand civilization we must live again the out-grown stages and see ourselves in the places where the steps of progress were taken that brought us to where we are.

It is a poor and unprofitable view of civilization that sees human advancement only as a process of aggregation, of massing people in hordes or piling materials in pyramids or cities. The mass accomplishments of the forgotten ages are all that have come down to us as evidence of the existence of large and well-organized communities that must have existed, and our sense of mystery is profoundly stirred when we wander in a primeval forest and suddenly become aware that we are among the skyscrapers of a great city, deserted, dead and forgotten for too many centuries for even a name to survive in the memory of man. Egypt still is densely populated, but the ruins of Tihah and the neighboring Maya cities of Peten lie deep in the forest of an uninhabited tropical country.

Note: Allusion to America and nothing human is foreign to us can be claimed a part or heritage from the civilization of ancient America. Do we have any heritage, claim or connection with the ancient American civilizations? If there is any possibility of such a connection, our interest is at once the more vital—and our ideas of civilization are immensely broadened.

The history of Egypt is known, at least as a sequence of events and a succession of names from the days of Moses to the present time, but no event, or name or personality has come down to us from the world of the Mayas. But from their stone constructions, we would not know that they had lived, and advanced to the stage that their monuments make plain. That civilization reached the city-building stage in America as well as in the Eastern Hemisphere is not the most significant fact to be derived from the study of American archaeology or ethnology. It is still more significant that many preceding stages of more primitive culture are represented among the natives of America.

If cities are the flower of civilization, they are also the blight, the culmination, decline and extinction of the energy and ability of the race. There is no proper fruiting and seeding of the city, no new life that comes out and is perpetuated.

An Age of Root Crops

Behind the age of corn was an age of root-crops, probably a long age, as indicated by the ^{numerous} species of root-crops that were domesticated, their wide distribution and the development of many local varieties. Two series of root-crops may be distinguished, those of the low-land tropics and those of the plateau regions. The tropical series included the sweet potato, cassava, yautia (Xanthera), yam, lleren (Calathea), yam bean (cacara), and canna. The plateau series included the potato, oca, anyu and ullucu of Peru, the Jerusalem artichoke of Mexico.

See Root crop paper.

The Incians had a large
series including Tacca,
Cyrtosperme

Ferments in pits
Underground storehouses
Culluma
Cyllene

FINDS EVIDENCE OF ANCIENT RACE

Dr. Gidley Discovers Traces
of Humans of 25,000 Years
Ago in Florida.

By the Associated Press.

MELBOURNE, Fla., June 13.—Man has lived for at least 25,000 years on the North American Continent.

A new birthday set back to the days of fantastic creatures that no longer exist has been figured out by Dr. J. W. Gidley of the Smithsonian Institution on the basis of new finds near here.

An ancient stone scraper, found by himself, and a crude arrow head, located beneath a mastodon bone by Charles P. Singleton are considered added proof of a very early existence of man.

Relics of Early Era.

The relics of an ancient stone age culture were uncovered in the same earth layer that contained bones of extinct animals known to have lived that long ago. They could not have been buried by a race of a later time, according to Dr. Gidley.

The discoveries are another link in the scientific proof that may refute the claims of anthropologists who believe man's first appearance on the North American Continent occurred less than 8,000 years ago.

The increased age of American man little bridges the gap with European man, however, for existence in the old world has been traced to 800,000 years ago.

Dr. Gidley also uncovered a vast collection of extinct animals. The remains will be studied for their bearing on the age of the deposits.

Many Animals Found.

His findings included bones of bears of a new, extinct species, camels, three horses of extinct types, bison of an extinct, long-horned type, tapirs, peccaries, an armadillo, a saber-tooth tiger, other animals of the cat tribe, several species of dogs and various small rodents.

All of the animal remains were found in a layer of earth underlying a swamp deposit. The flints were in the mid-portion and so situated that they could not have worked their way down from an upper layer, according to Dr. Gidley.

The stratum of earth is believed to have been laid down in Pleistocene times, although the exact phase of that period may only be worked out by studies of the bones and comparison with similar structures in other parts of the country.

Mr. Singleton, who first found the rich fossil deposits of the region, cooperated with Dr. Gidley. He is making further excavations under direction of Dr. Thomas Barbour of the Museum of Comparative Zoology of Harvard University.

Discovers Fossils



DR. L. W. GIDLEY.

Plant lore

Agriculture has educated the
race to barbarism

Trans-Pacific

How little was added to the imported culture is indeed remarkable and significant, and how little was added later!

Even from the first, some of the arts of the civilized invaders began to decay, showing no doubt, that in artistic ability the native races were inferior to the invaders. In

Babylonia as in Egypt the archaeologists have found *similar evidences of early decay.*

Transo-Pacific

St Louis Dec. 1, 1930

Townsend, Martin L. J. H.

Prehistoric Structures of Central
America - Who Greeted Them?

Troy my 1895 - had carried
Hoch's Pot Phrenician's and the
culture to America and the
builders of

American Monuments
were entirely distinct. Structural and
religious features essentially the same.
~~pyramids stone circles~~ also sun-worship.
Double development of ~~also human sacrifice~~
or American development
Complete series in America
not in Old World. Egypt and
Mesopotamia both pledged out
as original lands

Plant Lore and Primitive Culture.

Plants Domesticated in Ancient America.

The riddle of primitive civilization remains to be read, from ^{of other kinds, such as} record ^{that never was written.} The primitive ages were passed before writing began, and the oldest of written records take us back ^{only} but a short distance on the long path of ^{human} progress. We know how the arts of civilization have extended from one people to another, ^{as is known in many historical records} over much of the world but where to look for the beginnings is still in doubt. ^(trace the sequence) The sequence runs back through the Romans, ^{and} Greeks, Egyptians and Babylonians, but the beginnings ^{probably} were elsewhere, ^{and may have been far distant, but the traditions are} Some ethnologists would admit many beginnings and others would trace everything back to Egypt or to Babylonia. The traditional prepossessions of antiquity ^{in these countries} are still dominant, but are definitely opposed by the results of archaeological research. Upper Egypt was civilized before lower Egypt and the dynastic Egyptians entered from the East, from the land of "Punt." Behind the Babylonians were the Sumerians and the pre-Sumerians, who lived on the shore of the Persian Gulf and were a sea-faring people.

Archaeology has rendered its verdict in recent years regarding the early inhabitants of Egypt and Sumer, that civilized people were not the indigenous. In both countries an advanced civilization was received from the outside and these foreign cultures were much alike. A recent statement of the verdict of archaeology regarding the priority of the Sumerian culture is as follows:

^{metal} Pottery, stone work, and mound building, also many ^{considered} as rather advanced stages of social and material progress.

What tracks did man make in the primitive ages that can still be followed?

"Three things have to be compared: the contents of the Ur graves, the contents of the royal graves of the First Egyptian Dynasty discovered by Professor Flinders Petrie at Abydos, and the character of the predynastic civilization of the Nile Valley. The prehistoric civilization of Egypt and that of Sumer have nothing in common. Between the prehistoric art of Egypt and that of its First Dynasty there is a very great difference, not so complete as to amount to a breach of continuity but enough to mark an epoch; the changes are coming in towards the end of the predynastic period and by the time of 'Menes' we have what is virtually a new culture. It has long been recognized that this rapid development, which laid the foundations of what we know as Egyptian civilization, was due to some foreign influence,***** The Egyptians traced back the beginnings of their history to Menes, before whom came darkness and the demi-gods, and the discoveries of archaeology have justified their belief; for the Sumerians the First Dynasty of Ur came at the end of a period of civilization whose duration was to be reckoned in thousands of years, and though recent excavations have carried us back but a little way into that legendary period, yet they do substantiate in principle the Sumerian contention. Nobody looking at the contents of the graves, themselves older than Menes, can fail to see that they belong to a civilization already old if not actually decadent. Nothing is in an experimental stage; on the contrary, art is subject to conventions so stereotyped that it is hard to distinguish between objects which are demonstrably hundreds of years apart in age, there is a technique, especially in metallurgy, which could only result from centuries of apprenticeship - the Egyptians never in their best periods produced weapons as good as the socketed axes and adzes of early Sumer, - and the potter's wheel, introduced into Egypt well on in the Old Kingdom, had been used by the Sumerians for long ages.*****

*****Had that civilization died with the race which originated it the early conquests might have had but an ephemeral effect, but such was not the case. In Mesopotamia the political extinction of the Sumerians made astonishingly little difference to culture.*****The whole civilization of Babylon, and in a scarcely less degree that of Assyria, are rooted in the alien past, as their own historians of the decadence confessed.

Berosus, writing in the fourth or third century before Christ, describes a race of monsters half man and half fish which, led by one Oannes, came out of the Persian Gulf and settling in the coast towns of Sumer introduced the arts of writing, agriculture, and working in metal; "in a word," he declares, "all the things that make for the amelioration of life were bequeathed to men by Oannes, and since that time no further inventions have been made."

*****The Hittites of Asia Minor adopted the cuneiform script which was one of the greatest of the Sumerian inventions; Babylonian became the diplomatic language of the courts of Syria and even of Egypt; the cylinder seals of Syria and Cappadocia are both in form and in style derived from Mesopotamia; the sculptures of Carchemish trace their descent through Assyria to Sumer; the eclectic art of the Phoenicians in so far as it drew from Oriental models was in the same indirect way an offshoot of the Sumerian.****

*****Their civilization, lighting up a world still plunged in primitive barbarism, was in the nature of a first cause.*****"

"The Sumerians" by C. Leonard Wooley - Oxford University Press
pages 185-193.

Behind the Sumerians are the pre-Sumerians, who are recognized as a distinct race living with a highly developed art of painted pottery which was not preserved by the Sumerians but had a startling resemblance to ancient American pottery. Also the arts of agriculture and irrigation came into both countries with the foreign invaders.

Archaeology leads us out upon the shore of the Persian Gulf or the Indian Ocean and bids us look elsewhere for the cultural beginnings.

The work of the archaeologists has been thoroughly and critically done and the results intensively debated at each step. Such a result may be disappointing to many archaeologists who have thought that the problem of culture origins was to be settled by their researches.

The priority of Egypt or of Babylonia has been the subject of many controversies, as determining which country should stand at the background of early human progress, but this distinction is denied to both regions. Culture has a new mother-land to seek, where the sea-faring people came from who brought writing and the arts of agriculture and metal-working to the Sumerians.

Somewhere upon the shore of the ocean was the place where the seafaring pre-Sumerians came from, but they may have traveled far before they reached the head of the Persian gulf. Could they have left marks of their travels, or brought anything with them that could show where they came from? These are the questions that are now to be faced, and new kinds of facts must be brought into the equation, which the archaeologists have tried to solve in Egypt and Babylonia.

Breaking the Taboos

Check with Southern
archaeologists put with
taboo paper

Different Ways of Living

The abilities of primitive man were devoted to the great task of finding the different ways of life that the various races and tribes have developed in the different parts of the world. Man is a universal animal as no other species is, except those that he has carried with him as parasites or associates, as dogs and horses.

When a careful study is made of the habits and adaptations of any plant or animal, the life of each species to its environment is found to depend upon many complex relations that give it the necessary adjustment to its environment. Each of the different species is a different solution of the problem of life, and even the same species when it lives under different conditions must have alternatives of behavior that enable it to maintain its adjustment.

It is in this field of adaptation or adjustment to conditions that the use of human intelligence needs most to be understood and appreciated. The use and need of intelligence for multitudes of particular purposes is appreciated, but we are only beginning to use our intelligence for the main purpose of living, only beginning to get the idea of facing the main question of how our lives out to be lived. It may seem very remarkable that we should have been diverted so long from this main issue, but there are many reasons that go back into the past.

The principal underlying reason is that in the past it has been necessary that mankind should have a great devotion to the past, in order to make the accumulations of experience and develop the different ways of life.

Can not get properly beyond this point of view by reaching a scientific age.

Properly beyond not by leaving or dismissing the past, but only by understanding and remaining loyal to it.

We have stopped accumulating and handing on experience by contacts of successive generations, but are depending on scholastic contacts which are entirely inadequate for the purpose.

Some writers argue superficially that different systems of morals and social relations are made necessary by changed conditions. (See article by Will Durant, Forum, April 1929, condensed in Readers Digest, May)

In Egypt and Babylonia the archseologists have dug themselves out, and need to go elsewhere to look for the true beginnings of civilization. The true culture as it grew in these countries has been transplanted and has no true tap root running down to the native subsoil.

To show the need of plant lore to those who have not sought it.

It was only in Greece that the early artistic race found a native race that could sustain and develop it.

It was only among the Greeks that an artistic and scientific consciousness was attained, that is the basis of our civilization.

Just as we undoubtedly are inferior to the Greeks in the senses and satisfactions of artistic perception.

Age 2 Root-Crops

Gua camote, Mexican
word meaning tree-
camote, that is tree
sweet-potatoes. ~~The~~
~~It~~ This would indicate
that the ~~and~~ cassava
~~did not~~ reached
Mexico after the camote.

Civilization (Agriculture)

Lack of agric. point of new vitiates much that has been written-not merely matter of institutions, religion or discussion by Meadows. The chines and their rebellions, with an essay on ~~civilization~~ civilization covers many features and should be gone over, but not till agricultural features in relation to China have been stated. No doubt chinese system has effect of excluding people who have manual knowledge. This a serious defect in any nation. May explain why China could make no more progress after establishing a system that placed everything in hands of those who studied books but did not know things. This feature of adaptation of nations of means and under clearly conceived outside systems already existing and working changes in system. This sure to interfere with interests or business of somebody and this the necessary price of progress. Thus for continued progress agriculture must be in controlling or influential relations. Others under control likely to endanger state, by destroying agricultural basis. Merely industrial not enough, nor military nor political nor religious. But Meadows might well be reviewed briefly in framing up classification for general outline.

Plant Lore 2
Civilization (Social)

Social Biology in the Pacific Islands. Note facts stated by Stewart regarding Marquesa Islands that they were the finest race in the Pacific and that they had no such development of (manarety) as in other islands. Possible connection of these two facts, recognizing effect of parasitiation to bring about adverse selection. Note also in introd generally favourable opinion of Pacific islanders reflected in so many books. People of different groups show many racial differences, but alike in fine qualities and in having achieved a desirable existence so attracting that many Europeans settled in the islands. No other part of the world has so much literature of appreciation. Readily took Christianity and adopted civilization.

Point might be made that previous attempts have been made from standpoint of abstract principles of politics, morality or economics with little account of the more essential biological considerations, like agriculture and eugenics. Hence progress to be ().

Plant Lore.

Use photo from Casa Grande Ruin Mystery of the Cretan labyrinth in Casa Grande ruin in Arizona. ^{The design} In position to be reached from pile of earth fallen from upper story, but also in position to be made sitting on the floor in the corner of the room with no outside openings made by torch light. Made to be kept concealed?

Plant Lore

or

Each tribe is separate group of people works out its own solutions of life problems, realtions to environment, uses of plants and animals, and social adjustments. Most of the arts and accomplishments of civilization were not discoveries or original developments of our own race, but came as borrowings from other races, some of them of very recent date as the use of rubber, cacao, quinine, cocaine.

Handwritten note:
Mun -
Africa - p. 12

Plant Lore.

The domestications of food plants and animals and the discoveries of the uses of many natural products as rubber were accomplished by primitive people before the dawn of recorded history.

Plant Lore

published
Refer to essay on Geographical Botany by Robert Brown, in
1818 as Appendix V of Captain Tuckey's Narrative of an Expedition
to Explore the River Zaire, usually called the Congo, in South
Africa, in 1816.

Refers to Humboldt (Nouv. Espag. Vol. 2, p. 360) as suggests
possible American origin of banana, but opposes that idea. Several
other cultivated species discussed. Considers the peanut as
probably Asiatic and introduced into American from Africa.

Look up weed lists collected by Seemann and Christian, also
refer to Guppy and to recent large work on plant distribution
by ? - -

Plant Lore

Several of the tropical root-crops require no storage. They have only to be left in the ground until required for use.

The failure to develop and utilize the tropics goes back to the failure of the social system and adverse selection. Parasitism fails to develop the race, or to develop civilization.

The characteristics of prudence and judgement which are the chief requirements of advanced civilization undoubtedly were developed under conditions of agricultural life, there are reasons to believe that these necessary qualities are not developed or maintained under urban conditions.

The progress of primitive man was by imperceptible and unconscious graduations. No large steps except under pressure of compulsion. Some changes may have been abrupt for a particular tribe or family. Primitive man in small ^{localities} ~~tribes~~ - ~~families localized.~~
Fishes' law of language applies also to every other development. Large nations made the spread of languages mark advanced stage.

Get article - Science Supplement - Oct. 10, 1930 p.XII

"A first-hand study of the artifacts left by early man leads to the conclusion that all the cultures of the world, even including that of the American Indian, are the result of a process of evolution and have some single origin".

Plant Lore.

Civilization as a Storage Problem.

Civilization calls for continuous supplies of food, and may be viewed as a storage problem. Has been with modern facilities of communication widened our range of access to fresh food, but even for this purpose it has been necessary to develop many new specialities in the ancient art of storage. The discoveries that have led to artificial refrigeration and sterilization of stores food are reckoned among the most important advances of science.

To look back to the early stages of storage from the heights of our present development is not easy. A few of the most primitive tribes have ^{been} described as roaming from place to place to use the wild fruits and dig the wild roots, but making no use of storage.

A first stage of agriculture may be recognized before storage began to be practiced, except as root crops may be considered as stored by being left in the ground, until required for use.

Our northern root-crops are gathered and stored at the end of the season, so that they can be kept from freezing, and also to have them accessible in the winter when the ground is frozen and snow-covered, but some of the tropical root-crops as sweet potatoes and cassava have no definite period of maturity and may be due at any time as needed.

The problem of storage arose when primitive people extended into drier and colder climates where plants ceased to grow and periods of food scarcity were encountered. Nuts and seeds might be obtainable, ^{(dried roots were} but the natural substitute for the fresh roots, to supplement.

Kyllene and Kulluna root crops require most storage, cereals dry storage.

Plant Lore

Get article - Science Supplement - Oct. 10, 1930, p.XII

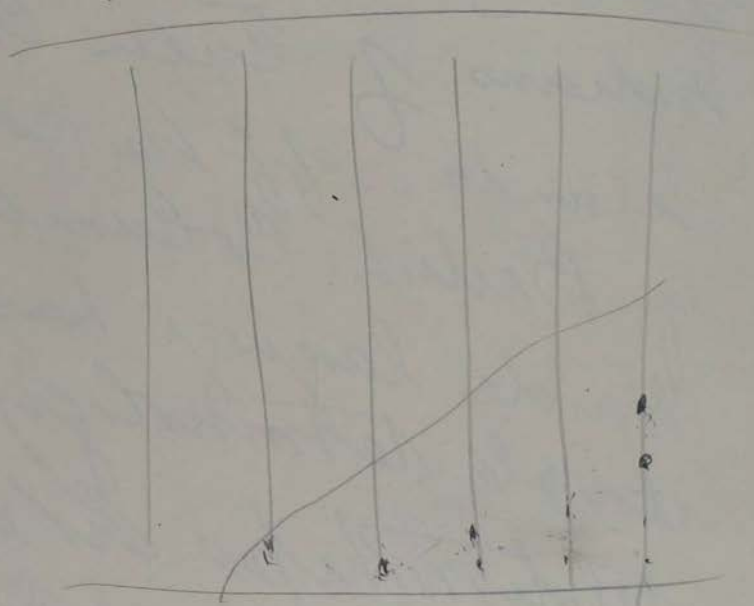
At least such is the judgment of Dr. H. S. Harrison, curator of the Herbarium Museum, as expressed in a report just submitted to the British Association for the Advancement of Science".

Plant Lore

Haide ^{and boat-builders}
Wood-working ^{carving} ^{practical}
^{the} ^{maritime} Haide
extensively among
Indians of Queen Charlotte
Islands off the coast
of British Columbia.
Haide language has
double terminology of
relationships like

Quichua

* Also the Haides
as "the embodiment of wisdom" *
* See Glossary Harrison Charles
Ancient Warriors of the North Pacific
(see Glossary)



Plant Lore

Before the dawn of recorded history

An ancient civilization existed which conquered and over-ran Western Asia and Europe, much as the Spanish Conquerors over-ran all of the populous areas of the American Continent. This prehistoric conquest is shown by the wide extension of the so-called Aryan languages among people of different racial types.

Plant zone

Roots and Bark Cloth

Cyllene and Calluna

Stores of dried Root Cps

Potatoes in the

Bark Cloth ^{Paper}

Going to the Ant

Agave with
Storage and Paper

Agriculture Primitive (Africa)

African Hoe Culture.---Dr. Hermann Baumann publishes in Africa for July a contribution to the study of primitive economics in the form of an analysis of the division of work according to sex in the use of the hoe in African methods of cultivation. It was for long held that the exclusive use of hoe culture by women was proof that agriculture and the settled life were the invention of the woman, who thereby acquired legal and social ascendancy, while man only took part in the tilling of the soil with the introduction of the plough. Now, however, a higher form of hoe culture is recognised in which the man takes a part

("Nature" A weekly Journal of Science, No. 3070, Vol. 122,
September 1, 1928, P.328, Research Items.)

American Agriculture

The greatest contributions of America to the world are in the field of agriculture, the gift of plants and the knowledge of their uses. Many primitive civilizations had existed in America, for the long periods that must have been required to develop the different local races, languages and customs.

Plant Lore.

Primitive peoples adjacent to agricultural races take up the civilized animals first.

Pastoral age antecedent in this sense.

Earliest remains of neolithic objects not accompanied by indications of agriculture. Primitive metal knives and even guns in advance of any other equipment of civilization.

Plant Lore

Primitive peoples adjacent
to agricultural races take
up the civilized animals
first.

Pastoral age antecedent
in this sense.

First ~~settlements of~~
Neolithic. Earliest remains
of neolithic objects not
accompanied by indications
of agriculture. Primitive
tribes adopt ^{metal weapons and other} metal
tools ~~impl~~ tools and
even guns in advance
of any other equipment
by civilization.

Plant Lore.

More may be learned regarding the status of particular plants in relation to wild types, but the general contrast between the Old World and New World series is not likely to be changed.

Where have plants been
domesticated for the
longest period?

Plant Lore

Civilization may be said to have reached the plane of consciousness in the period of the World War, and the need of a practical understanding of the factors and forces of civilization is greater than ever before. We seem now to be approaching quite rapidly the stage when practical applications of biological facts must be made in matters of human welfare which have seemed in the past to lie in the realm of fate, beyond the range of human comprehension or of deliberate adjustment. From studies of plants and animals we are now passing to problems of human adaptation, of adjusting ourselves as a race to conditions of our existence. It is not to be expected that the same solutions will be reached in the human problems as in those of the animals and plants, but it is clear already that the underlying considerations are the same, and that we must seek new understanding of many of our human issues in the new fields of biology which have been opened in recent decades of the development of science.

Plant Lore

The early civilization of the Mediterranean Countries has been explored and reconstructed in recent years, so that it now stands out almost as clearly as the Mexican and Peruvian civilizations and is seen to be closely parallel in many features. The Egyptian, Sumerian and Cretan civilizations have become very well known through the zeal of many workers in archaeology, while the Peruvian and Mexican civilizations were still in existence at the time of the Spanish Conquests.

When the five primitive civilizations are compared, essentially similarities are found in many important features, although the similarities between the civilizations of the same hemisphere are hardly greater than between those of different hemispheres.

epic
Orthophonic languages

Incas and Mayas physically alike

Trans-Pacific Language.

Plant Lore

The early civilization of the Mediterranean Countries has been explored and reconstructed in recent years, so that it now stands out almost as clearly as the Mexican and Peruvian civilizations and is seen to be closely parallel in many features.

The Egyptian, Sumerian and Cretan civilizations have become very well known through the zeal of many workers in archaeology, while the Peruvian and Mexican civilizations were still in existence at the time of the Spanish conquest.

When the five primitive civilizations are compared, it is seen that they were essentially ~~similar~~ ^{in many important features} similarities are found ~~not only between~~ ^{in many important features} them.

~~They are of the same hemisphere~~
but ~~there are~~ ^{the same} similarities although the ~~features~~ ^{features} similarities between the civilizations of the same ~~part of the hemisphere~~ ^{part of the hemisphere} are hardly

greater than between those
of different hemispheres.

Orthophonic languages

Incas and Mayas principally
alike.

Trans-Pacific Language.

The principal result of Napoleon's invasion of Egypt was the finding of the Rosetta Stone, the trilingual text of which unlocked the secret of Egyptian hieroglyphs. No Rosetta Stone has been found, or will be found, in Central America. It happens, however, that Diego de Landa, chief officer of the Inquisition in Yucatan, and a man much less concerned than Napoleon with the accumulation of fact, was compelled to defend himself in Spain against charges of cruelty to the Indians. In justification of his acts, before the Council of the Indies, he compiled data on the customs of the Mayas at the time of the Spanish conquest and by the merest chance part of this compilation was found in 1863 by the antiquarian Brasseur de Bourbourg, who proceeded to publish it. The work contained, among other things, a specimen year of the Maya calendar, together with hieroglyphs of the twenty days of the month and the eighteen months of the year.

Deciphering Mayan Mysteries, by Herbert J. Spinden, Ph.D.
Scientific American, March 1928. p. 232-233

Fluctuations of Ocean Level.

Many speculations regarding human migrations have included the assumption that great changes in climates and topographies of different parts of the earth's surface have taken place since the early stages of prehistoric development. Several "lost continents" have been projected in the Atlantic, Pacific and Indian oceans, and even the polar zone has been featured as the original Garden of Eden. The tradition of Atlantis has ^{inspired} ~~convinced~~ ^{to elaborate on the} many writers that an ancient country to the west of Europe has been submerged. Many examples of supposed elevation and subsidence in the Pacific islands and along the coasts of South America have been described by Darwin and other writers.

Theories of land movements now are less popular among geologists, the tendency in recent years being to ascribe the shifting of shore lines to differences in depth of water. Mountains may be formed where sedimentary deposits are crystallized and pushed up, but the more general changes of water levels are interpreted as results of glaciation, that is, of withdrawing water from the ocean and piling it up in the polar regions. The "ice-caps" or present accumulations of ice in the polar regions are estimated as sufficient to raise the ocean level 200 feet. Many elevated shore lines are recognized, some of them nearly 300 feet above the present ocean level. Also submerged shore lines are traced in many places, at least forty feet below the present sea levels. A lowering of the water level in the Pacific to the extent of 40 feet undoubtedly would give us an entirely different impression of the feasibility of trans-Pacific contacts, since the area of many small islands would be increased, and many shoals would be brought above water and made into habitable islands.

No doubt islands have emerged at times and later have been covered again by the waters of the Pacific, and some of these fluctuations may have occurred in the human period. A few thousand years ago it may have been much easier than at present for primitive people to cross the Pacific, but it is useless to speculate at present on the possibilities of further discoveries being made in the Pacific Islands or in the surrounding continental lands. Whether it was easier or not to cross the Pacific at some former period would not affect the interest or significance of other evidences that prehistoric communication took place. The European continent unquestionably had human inhabitants during the later glacial periods, and the remains of a succession of human races are now being associated with the several glacial deposits. The origins of the races of the successive inter glacial periods are still unknown, but apparently were extra-European. Man as an animal is very old, as shown by association of human remains with bones of extinct animals in several widely separated regions, as South America, Europe and South Africa.

Fluctuations of Ocean Level.

Many speculations regarding human migrations have included the assumption that great changes in climates and topographies of different parts of the earth's surface have taken place since the early stages of prehistoric development. Several "lost continents" have been projected in the Atlantic, Pacific and Indian oceans, and even the polar zone has been featured as the original garden of Eden. The tradition of Atlantis has ^{convinced many writers} suggested that an ancient country to the west of Europe has been submerged. Many examples of supposed elevation and subsidence in the Pacific islands and along the coasts of South America have been described by Darwin and other writers.

Theories of land movements now are less popular among geologists, the tendency in recent years being to ascribe the shifting of shore lines to differences in depth of water. ~~The ocean levels are supposed to fall in the glacial periods, when the~~ ^{of withdrawn water} ~~water is withdrawn from the ocean and piled up in the polar regions in vast accumulations of ice.~~ ^{piling it up} Mountains may be formed where sedimentary deposits are crystallized and pushed up, but ^{the more general} ~~the changes of water levels of glaciation appear much more general.~~ ^{are indicated as result of} The ice now piled up ^{are} in the polar regions is estimated as sufficient to raise the ocean level 200 feet. ^{also} ~~Submerged shore lines are traced in many places, at least forty feet below the present sea levels, and many elevated shore lines are recognized, some of them 200 feet or more above the present ocean level.~~ A lowering of the water level in the Pacific to the extent of 40 feet undoubtedly would give us an entirely different impression of the feasibility of trans-Pacific contacts, since the area of many small islands would be increased, and many shoals would be brought above water and made into habitable islands.

nearly
300

"ice-caps" or
present accumulations of ice

No doubt islands have emerged at times and later
Presumably many changes have taken place in the size and location of
have been covered again by the waters of
islands in the Pacific, and some of these fluctuations may have occurred in the
human period. A few thousand years ago it may have been much easier than at
present for primitive people to cross the Pacific, but it is useless to speculate
at present on the possibilities of further discoveries being made in the Pacific
Islands or in the surrounding continental lands. The European continent unquestionably
had human inhabitants during the later glacial periods, and the remains of a succession
of human races are now being associated with the several glacial deposits. ~~widely separated regions, as South America, Europe and South Africa.~~

The origins of the races of the successive inter glacial periods are still
unknown, but apparently were extra-European. Man as an animal is very old, as
shown by association of human remains with bones of extinct animals in several
widely separated regions, as South America, Europe and South Africa.

Whether it was easier or not to cross the Pacific at some former period would not
affect the interest or significance of other evidences that prehistoric communication
took place.