provided specific train
edge and skills. In a
properly indoctrinate
propriate action on h
spiritually prepared
leaders.

1–3. Objectives

a. Train the soldie
niques of survival and

b. Enhance the sol
to survive, evade, and

c. Familiarize the
planning and executin
maneuvers.

keyed to the individual
are remembered.

Size up th

Undue hast

Remember

(6) Learn from the
and getting food and dri
cerning local hazards.

(7) Avoid physical c
do so.

(8) Paper money is
Hard coin is good. Also,
bacco, salt, razor blades,
may be valuable barterin
tion—do not overpay.

(9) Leave a good in
need this help.

Section II.

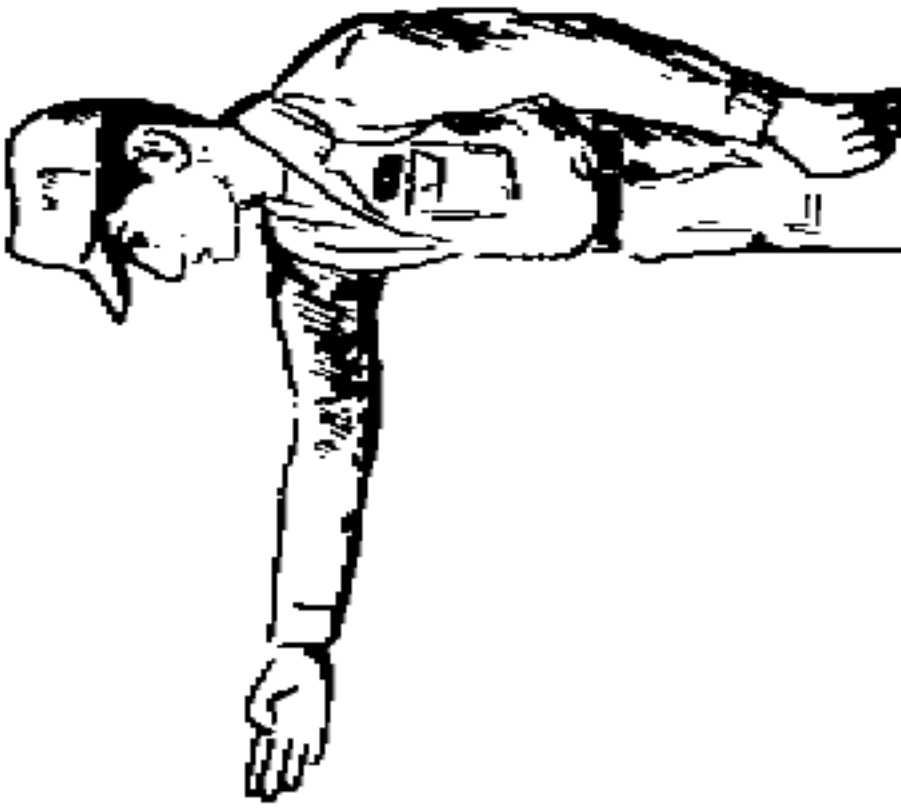
2–3. Where Are You

north, any other direct
below can be used any t
for a stick placed in t
(fig. 2–2).

(*a*) *Steps to fol*
stick about 1 meter long

Step 1: Push t
fairly level, brush-free
will be cast. The stick n
to obtain a more conven
tion, does not impair th
method.

Step 2: Mark
peg, stick, stone, twig,
or other means. Wait u



NORTH TEMPERATE ZONE

a valuable aid when th
sky, possibly out of sig
high terrain features.

(2) South of the
Southern Cross will hel
rection of south and, fr
rection. This group of
like a cross that is tilte
forming the long axis,
called the "pointers." F
extend the step five time
point (fig. 2–5). This po
of south. From this poin
horizon and select a land

* *c. Determining Time*
previously described (fig

time of day is importa
ing a rendezvous, pre-a
separated persons or gr
ing duration of dayli
o'clock shadow-clock t
but the spacing of the o
ventional time, varies
and the date.

(4) The watch met
can be in error, especial
may cause "circling." T
to shadow-clock time
method. This eliminates
to complete a shadow-ti
thereby permits you to
readings as necessary

(g) Food require
during travel. This sho
take special travel to fu

2–7. Following a Ridge

Follow a route parallel
below it. Game trails
ridges, and may be use
find less vegetation and
locating landmarks.

2–8. Following Streams

Using a stream as a rout
lar advantage in strange
a fairly definite course a

2–11. Power Lines

In many countries, elec
for miles through spar
Usually the right-of-wa
ford ease of travel. Whe
these features, care mus
ing transformer and rel
ably be protected by gua

2–12. Mountains

a. General. Travel in
country can be dangerou
know a few tricks. What
a distance might be a
leys. In extremely high
glacier that appears to

ing the rope. At the sa
the anchor point. Afte
one strand of the double
rappel only on modera
gentle slopes. Its main
and faster to use, espe
Rappels and other mo
discussed in FM 31–72.

2–13. Snowfields and G

a. The quickest way t
is to slide down on you
stout stick about five fe
into the snow to stop a
also may be used to
(cracks in the ice).

b. When traveling on

(*c*) A ledge o
indicating the presen
(*d*) Any heav
dicate where the chan
(3) When selecti
lowing points in mind
(*a*) When poss
across the current at
(*b*) Never try t
or close to a deep or ra
(*c*) Always for
to a shallow bank or s
occur.
(*d*) Try to avo
can cause serious injur
that breaks the current

constructed without s
axe and a knife. Con
men to be 12 feet lon

1. Build the
they slope downward
with an axe so the ra

2. Cut four
the top and bottom o
2–7). Make the notch
the outer edge of the l

3. To bind th
each notch a three-sid
foot longer than the
the notches on one sid
ing those on the other.

4. Lash the

thick. A pole is used to
the open part of the riv

c. Rapids or Swift

(1) Swimming
not as great a problem
shallow rapids, get on
pointing downstream;
and your hands alongs
much like a seal moves
swim on your stomach
sible. Watch for curren
be sucked under becaus

(2) A raft crossin
may be accomplished by
at a bend in the river
useful when several men

e. Quicksand. Bogs. found most frequently swamps. Pools of mu vegetation and usually weight of a rock. If obstacle, attempt to br or foliage. If none are face downward with th ming or pulling your body horizontal. Use th quicksand.

2–15. Signaling While T

There is always a chan man, or a group, is not especially when visibili

through the sighting h
can be seen on the tar
horizon even though no
Mirror flashes can be s
days.

e. Use a spruce torch
a tree with dense foliag
lower branches to light t
enemy may be attracted
that the fire is not likely
danger your safety.

Section III. HEA

2–16. Aids to Maintaining

Protection against disease

(*g*) Adopt stric
human waste and garba

(2) If vomiting o
stop eating solid food u
fluids, particularly pota
at frequent intervals.
resume eating semi-soli
should be maintained.

c. Guard Against He
develop a tan by gradua
uous exertion in the hot
The lesser illnesses cause
by consuming enough po
place losses through
Avoid overeating as this
jury.

2–18. Smaller Forms of Li

a. Do Not Be Fooled. I
can be more dangerou
even a scarcity of food
greatest danger is in thei
ening and often fatal dis

(1) Disease-transmit
environmental conditions
as proper amount of su
and suitable breeding site
you have only a limited n
ting agents to guard aga
time.

(2) Frequently, the
nisms which are transmit
time in the course of the

of ticks are the hard or w

g. Mites, Chiggers, an
insects are common in ma
their ability to irritate is
to their size. Chiggers are
mites which bore into the
discomfort. People partic
bites may become ill. In
chiggers transmit scrub
mite may cause various sk
or Norwegian itch. Secon
of scratching may result.
infested with lice. Try to
contact with the natives.
not to scratch, because y
feces into the bite. It is th

attacked, plunge through some dense brush or undergrowth. The twigs, springing back into position will beat off the insects.

l. Leeches. These blood-sucking animals are found in widely separated areas of Borneo, the Philippines, Australia, the South Pacific, and various parts of South America. They cling to blades of grass, leaves,

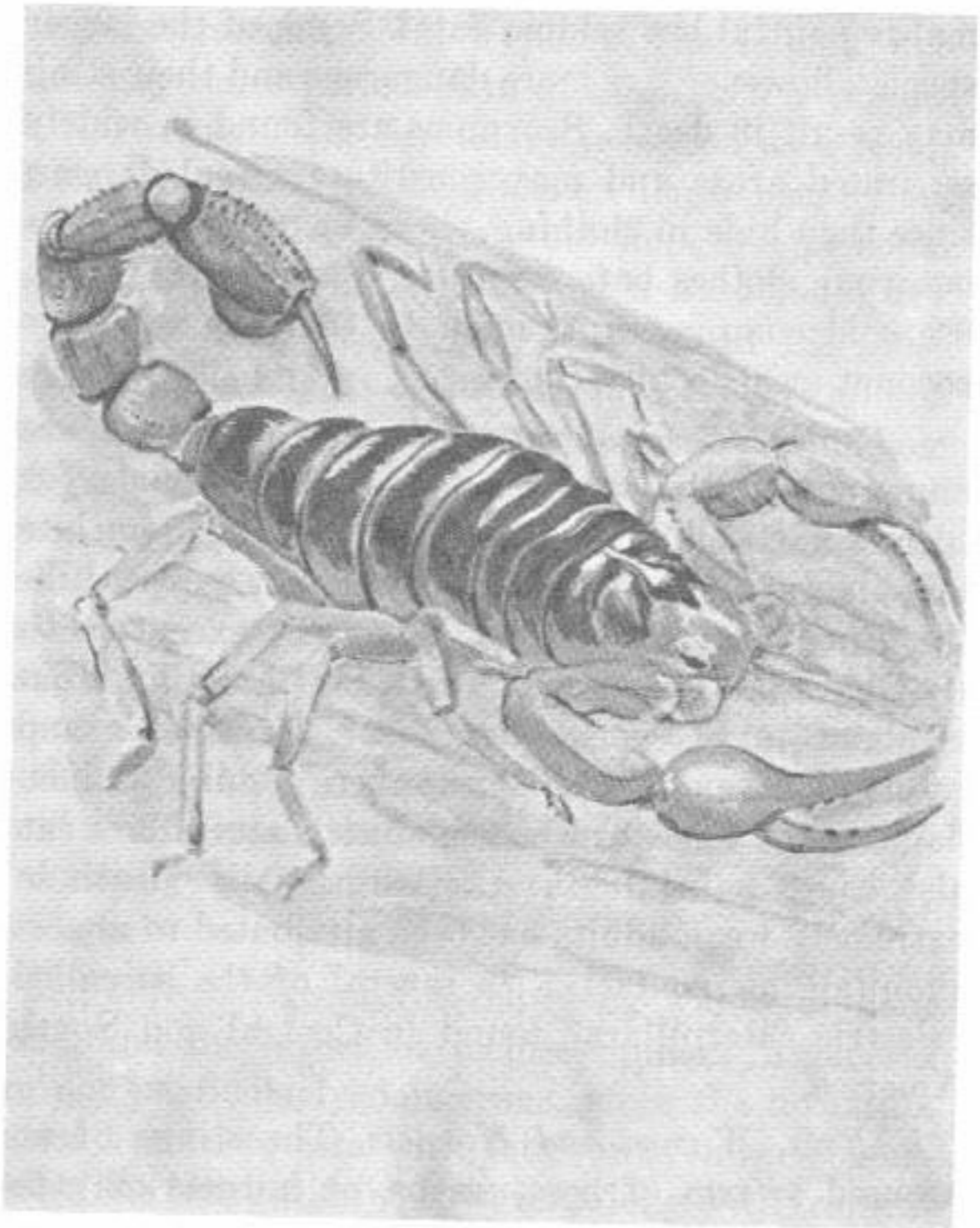


Figure 2–11. Scorpion.

on blood cells and the
bladder or intestine. Pr
will help avoid exposur

n. Hookworm. Comm
tropics, the hookworm
feet or any other expose
the ground. There is no
wilderness areas away

2–19. Poisonous Snakes

a. Facts Outweigh Fic
mon among men, but c
training than experienc
proportion of all snakes
(app. C). A variety of p
tropics, but the danger f

d. Poisonous Short-
the relatively short fa
this group, even light c
to man. Their venom
poisonous snakes. Snal
fanged group are the
snakes. They comprise
Australia, and many s
Malaya, Africa, and Ne

(1) There are 10 o
found in Africa and Asia
more or less able to form
is the largest of poisonou

(2) The venom of
chiefly affects the nerves
painful until some time

stricting band ahead of
up the arm or leg. The
placed tightly enough t
surface blood vessles, bu
the pulse (arterial flow).

(4) If accomplished
single cut over each fan
be more than one-half in
deep and should be mad
to the bitten part.

(5) Apply suction t
kit is available, use its
available, apply suction
blood and other fluids fr
is not harmful in the mo
sores in the mouth. Eve

face of the water with
strokes.

4. At close quar
knife to stab the shark
belly.

5. As a last reso
to push it away, or gras
the shark until you can v

(2) *On a raft.*

(*a*) Do not fish fr
nearby. Abandon hooked
Do not clean fish over t
sighted.

(*b*) Do not throw
are around.

(*c*) Do not dangl

tropical and subtropica
water. It is considered b
than a shark. The barra
ly (fig. 2–16).

e. Electric Ray. Four
along sandy and muddy
torpedo, can give para
however, is rarely encou

Amazon River and its trib
They are attracted even b
of blood in the water. Yo
fested stream with reason
the bleeding carcass of a

c. Avoid wild buffaloes because of their continued mean tempers. Approach wild pigs with caution. Elephants, tigers, and other large animals avoid man if given a chance, but they may charge when startled.

d. Bites from all canines (dogs, jackals, foxes) as well as some other meat eaters may cause rabies. Blood sucking vampire bats are not dangerous unless they are rabid or their bite becomes infected.

2–22. Poisonous Plants

a. Just Like Home. The danger from poisonous plants in other regions of the world is no worse than in parts of the United States. As a rule, poisonous plants are not a serious hazard; but under certain conditions, they can be dangerous. The two general types of poisonous plants are those poisonous to touch and those poisonous to eat.

b. Plants Poisonous to Touch. Most of the plants poisonous to touch belong to either the sumac or the spurge families. The three most important poisonous plants in the United States are poison ivy (fig. 2–18), poison oak (fig. 2–19), and poison sumac (fig. 2–20). All of these plants have compounded leaves and small, round, grayish-green or white fruits. Knowledge of the appearance and effects of these plants will help you in other parts of the world where similar plants flourish. A good field treatment for these poisonous plants is to apply wet wood ashes to the affected area of the body.

(1) Symptoms of plant poisoning are similar in all parts of the world—reddening, itching, swelling, and blisters. The best treatment after contact

(*a*) The black poison wood of Central America.

(*b*) Carrasco, a shrub of the West Indies.

(*c*) The Rengas trees of Malaya, the Philippines, and South Pacific Islands.

Figure 2–19. Poison oak.

(*g*) The milky ju
castor oil or castor bear
papaya tree.

c. Plants Poisonous to
sonous plants is not great
ber that is nonpoisonous
to learn the plants that a
eat strange plants in mi
while before continuing.

(1) In arctic and s
assume that less than a c
Two of the most poisono
are water hemlock and po

(2) Poisonous plant
tropics in no greater prop
States. If in doubt about

CHAP

FOOD AND

Section I. G

3–1. You Need Not Starve

a. It takes little reasonin
water, man's most urgent
is especially true during
every ounce of energy and

not possible to learn abou
reading this manual. If yo
tify the plant, and know h
you should derive enough f
alive.

b. For study purposes a
gives descriptions and pi
plants that can be eaten. Be
"pilot plants"; they will e
food possibilities of other p

c. Do not limit your stud
descriptions of plant food
every opportunity to see the
habitat; then, if forced int
any area of the world, yo
best plant food of a region

probably eaten some of t
daily food. The time ma
available but to eat insect
are much more palatabl
disguised in a stew.

b. Foods derived from
food value per pound
plants, but are more diffic
of edible animals, includi
and how to catch them, in

3–7. Foods From Fresh Wa

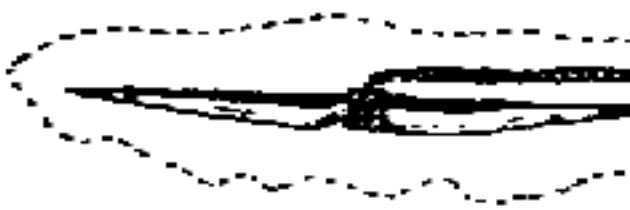
Fresh water lakes, ponds
abundant food reservoirs.
port more animal life in
land, and often the food

hooks, improvise them ou
hardwood (fig. 3–1). B
fibers, a sturdy line can b
ner bark of a tree, knot t
secure them to a solid ba
hand and twist clockwis
other counterclockwise. A

(*c*) *Using your ha*
tive in small streams wit
shallow ponds left by rece
your hands in the water
water temperature. Reach
keeping the hands close t
Move the fingers slightly
Then work your hand ge
you reach its gills. Grasp t
the gills.

(*d*) *Muddying*. Sma
by the receding waters of

BAITED S



put into building a trap depends upon the need for food and the length of time you plan to stay in one spot.

3. If near the sea, pick a trap location at high tide and build it at low tide. On rocky shores, use natural rock pools. On coral islands, use natural pools on the surface of reefs by blocking the openings as the tide recedes. On sandy shores, use sandbars and the ditches they enclose. Fish in the lee of offshore sandbars. Build the trap as a low stone wall extending outward into the water and forming an angle with the shore.

4. In small, shallow streams, make a fish trap with stakes or brush set into the stream bottom so that the stream is blocked except for a small narrow opening into a stone or brush pen. Wade in and herd the fish into the trap. Catch or club them when they get into shallow water.

(*h*) *Shooting.*

1. If you have a weapon and sufficient ammunition, try shooting fish. Aim slightly under the fish in water that is less than three feet deep.

2. A hand grenade exploded in a school of fish will supply food for days. Dry or preserve those that are not eaten fresh.

(*i*) *Poisoning.* Throughout the warm regions of the world, there are various plants and other materials which natives use for poisoning fish. The active poison in these is harmful only to cold-blooded animals. Fish poisons include—

1. The derris plant. This woody vine grows in Southeastern Asia. Powder the roots and throw them into the stream at its head waters if possible.

Crush the seeds and th
pond (fig. 3–4).

fish. Make a small spoc
ration can or from any
an improvised fish hoo
provised spinner to th
When fishing, move the
tion in such a way tha
brates. Fish close to the
the shore drops off to la
reeds, or closely to some

b. Frogs, Newts, and
amphibious animals inh
water in warm and tem
the world.

(1) Hunt frogs at
cated by their croakin
larger ones on a hook a

FRESH WA

BLUE

food. Consequently, conc
tioned above while consi
bigger game.

(2) Hunting anima
job for even the most exp
fore, as a beginner, "still
animals pass—a trail, w
ground. Hide nearby, alw
mal cannot detect your sc
within range of your wea
Remain absolutely motion

(*a*) When stalking
wind, moving slowly and
is feeding or looking the
it looks your way.

(*b*) Hunt in the

(*a*) To catch a m
trees, try inserting a sho
and twisting so that any
the fork. Keep the stick

(*b*) Smoke burro
their dens; then using a
a long pole, snare the qua
hole.

(*c*) Bait a fish hoo
it on the shore near the
bird will snatch it.

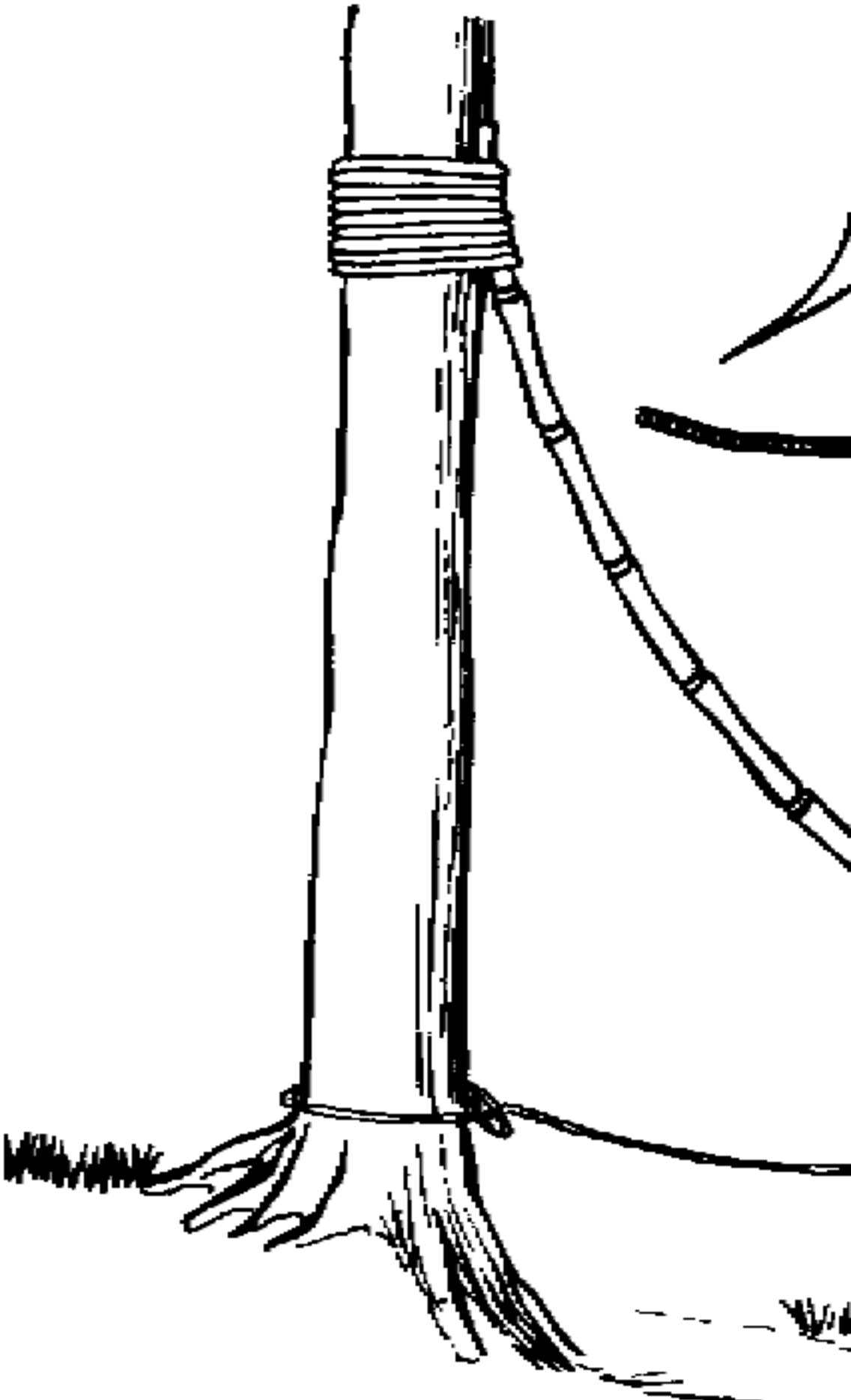
(*d*) Set snares or
containing fresh tracks
in areas previously used
Use animal entrails for
in a runway, erect barrier

small mammals and bir
leaves or grass (fig. 3–11

(7) *Spring and spe*
mals using a bamboo sp
the quarry strikes the co
to the trigger mechanism.
the spear is driven by the
(fig. 3–12).

(8) *Deadfall.*

(*a*) Catch medium
deadfalls; however, *use th*



(*b*) Eat frequentl
milk, boiled water, or the
nut milk is a laxative an
important (para 3–17*c* (
it is available.

(2) *Cholera and t*
have been inoculated, t
tracted unless you are ve
you drink.

c. Nonpotable water m
leeches. Drinking water
have severe consequences

(1) *Flukes.* Blood fl
luted water, especially i
lowed, the fluke will bore
as a parasite, and cause pa

a. Rocky Soil.

(1) Look for spring
have more and larger sp
rock. Because limestone
are readily etched in it
these caverns for springs.

(2) Because lava ro
source of seeping ground
along the walls of valley

(3) Look for seepag
through a layer of porous

(4) In areas abunda
over the hillsides for gree
base of the greenest area,
seep in.

b. Loose soil.

c. Places that are visibly damp, where animals have scratched, or where flies hover, indicate recent surface water. Dig in such places for water.

d. Collect dew on clear nights by sponging it up with a handkerchief. During a heavy dew, you should be able to collect about a pint an hour.

e. For a detailed discussion of finding water in the desert, see chapter 7.

3–16. On Mountains

Dig in dry stream beds because water is often present under the gravel. When in snowfields, put snow in a container and place it in the sun out of the wind. Improvise tools from flat rocks or sticks if no digging equipment is available.

3–17. Water from Plants

If unsuccessful in your search for ground or runoff water, or if you do not have time to purify the questionable water, a water-yielding plant may be the best source. Clear, sweet sap from many plants is easily obtained. This sap is pure and chiefly water. Check the following sources in an emergency:

a. Plant Tissues.

(1) Many plants with fleshy leaves or stems store drinkable water. Try them wherever you find them.

(2) The barrel cactus of the southwestern United States is a possible source of water (fig. 3–16). Use it only as a last resort and only if you have the energy to cut through the tough, outer, spine-studded rind. Cut off the top of the cactus and smash the pulp within the plant. Catch the liquid in a container. Chunks may be carried as an emergency wa-

b. Roots of Desert P
have their roots near th
"water tree," desert oak
examples. Pry these roots
them into 24- to 36-inch
and suck out the water.

c. Vines, Palms, Cocon

(1) *Vines.* Not all v
but try any vine found.
for tapping a vine. It wi

(*a*) Cut a deep no
as you can reach.

(*b*) Cut the vine o
let the water drip into y

(*c*) When the wat
other section off the top.

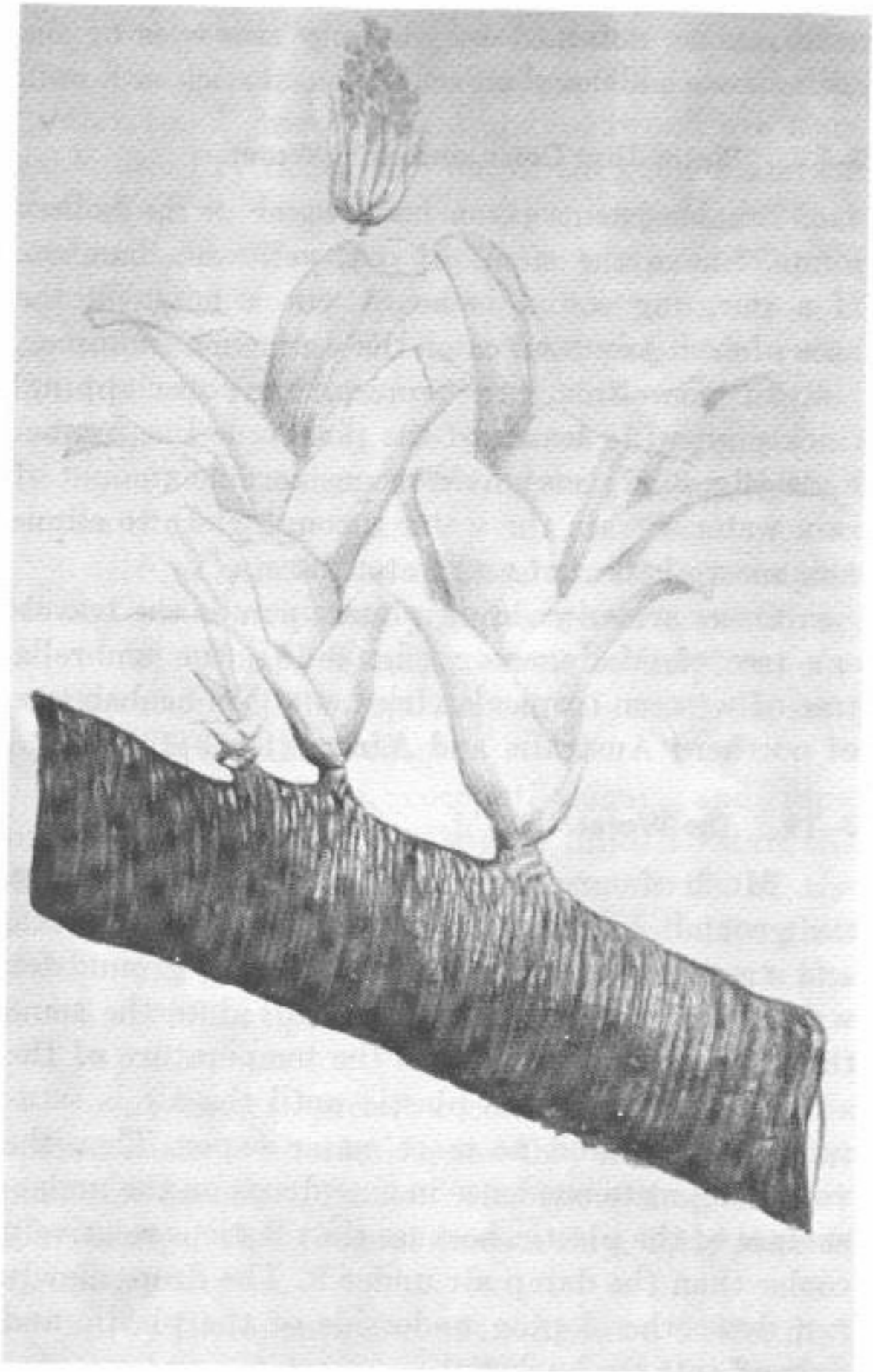


Figure 3–17. Bromeliad catches water.

6 IN. IN DIAMETER

TREES UP TO 60 FT. TALL

Figure 3–20—

CHAP

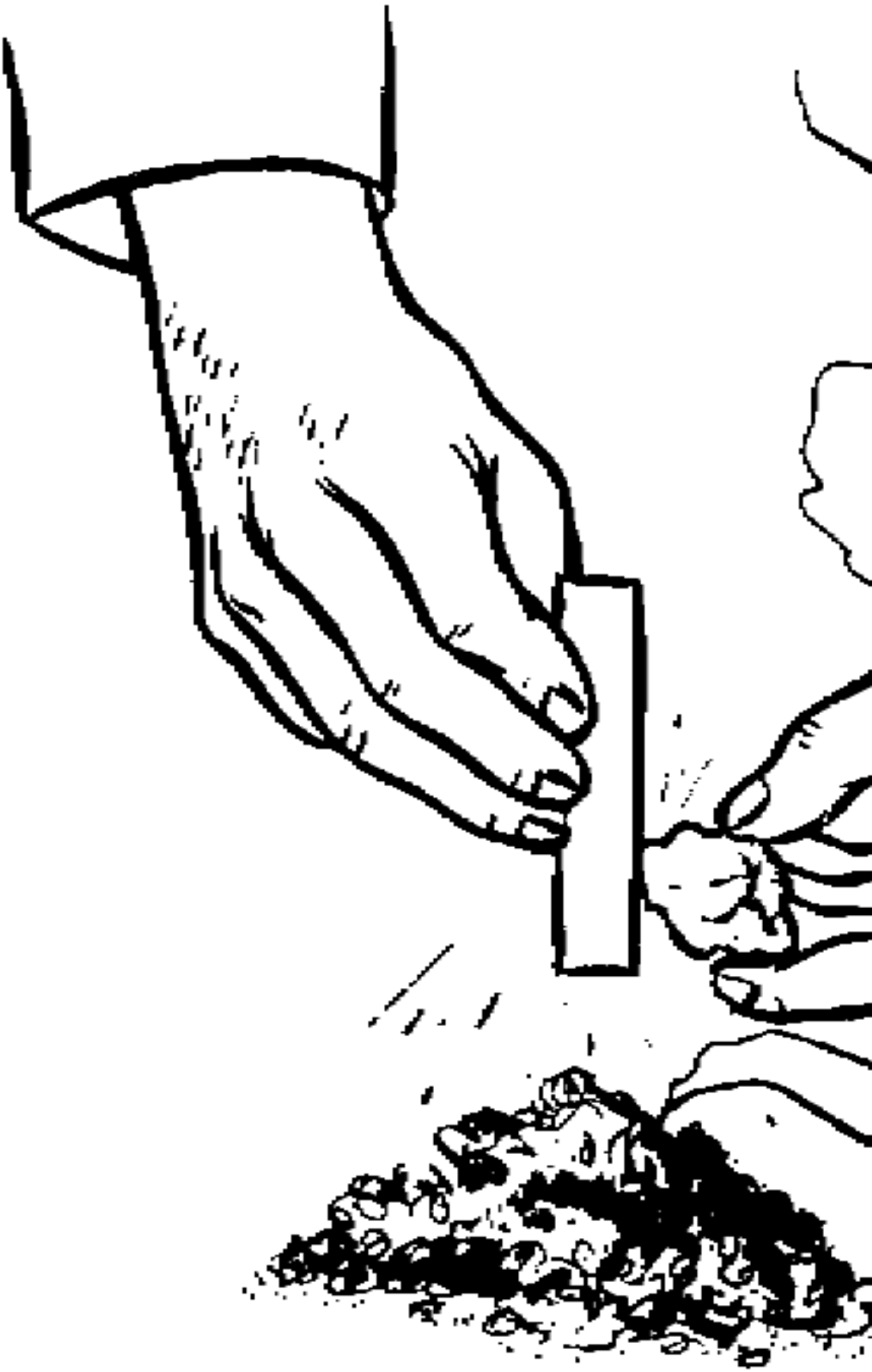
FIREMAKING A

Section I.

4–1. Importance

a. Fire is needed for wa
ing, cooking, and purifyi
vival time is increased
your ability to build a fir

Figure 4–1.



other. This method of s
used in the jungle. Use s
wood as a rub stick and t
nut flower as the wood b
fluffy brown covering of
dry material found at the
(fig. 4–6).

(4) *Ammunition and*
tered pile of kindling and
from several cartridges at
two rocks and sprinkle a l
Then grind the two roc
above the powder at the b
ignite the powder on the ro
amount of powder and kin

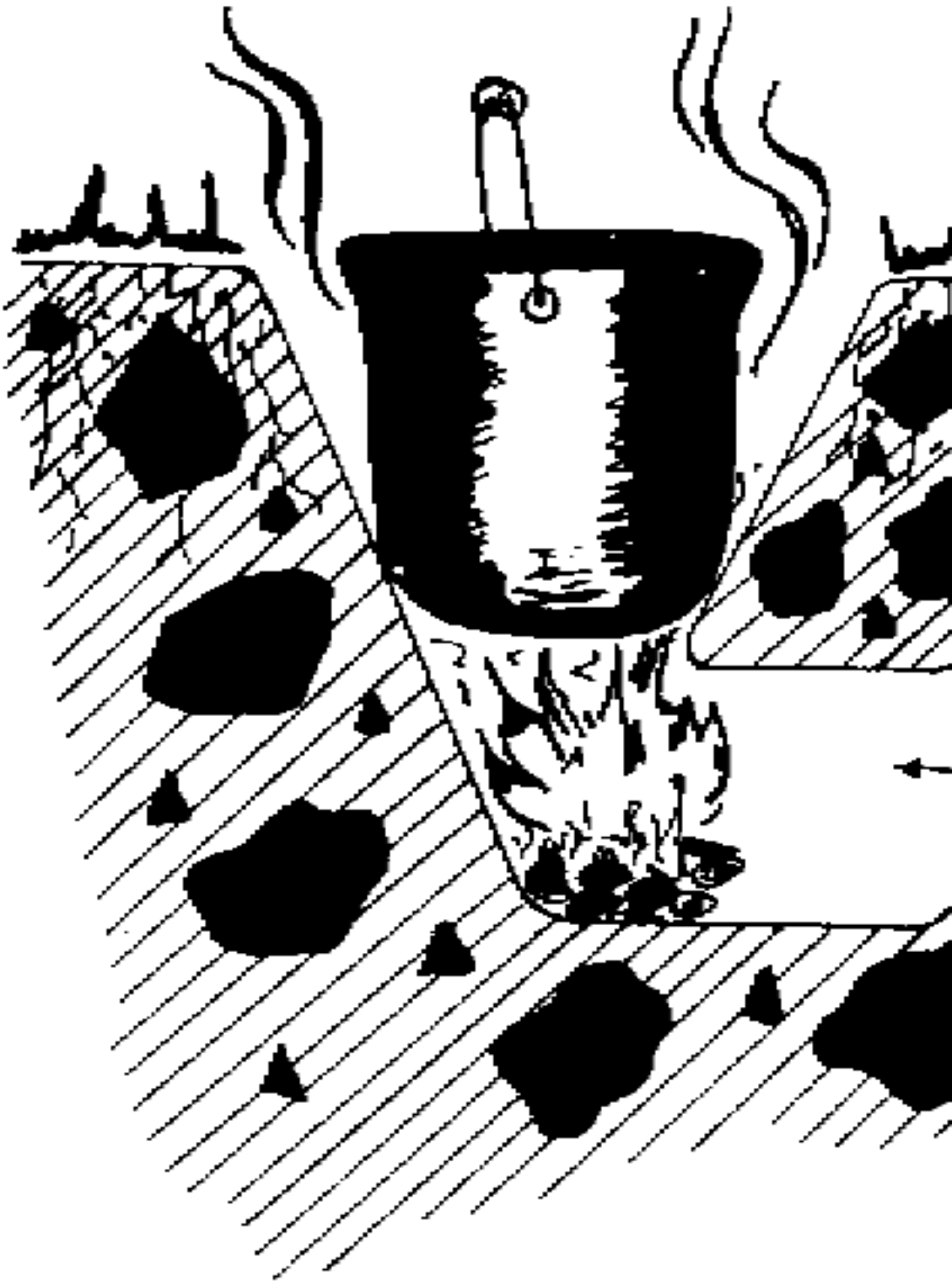


Figure 4–9. Under

body and clean out the in

(*a*) Hang the carcas
a convenient limb. Cut its th
to drain into a container. Bo
It is a valuable source of fo

(*b*) Make a ring cut
joints and a "Y" cut down
hind legs and down the bell

(*c*) From the belly
foreleg.

(*d*) Make a clean circ
organs.

(*e*) Working from t
move the skin. The skin of
will pull off like a well-fitte

(*f*) Cut open the be

(2) *Larger animals.* steps outlined in (1)(*a*) t that hanging the carcass n of the lack of a suitable me mal.

(3) *Rats and mice.* Bo atable meat, particularly if rodents should be skinned, and mice should be boiled may be cooked with dande clude the livers.

(4) *Rabbits.* Rabbits a fats to a diet. They are easy make an incision behind the of skin to allow insertion the hide. To clean it, mak belly, spread open, and sha

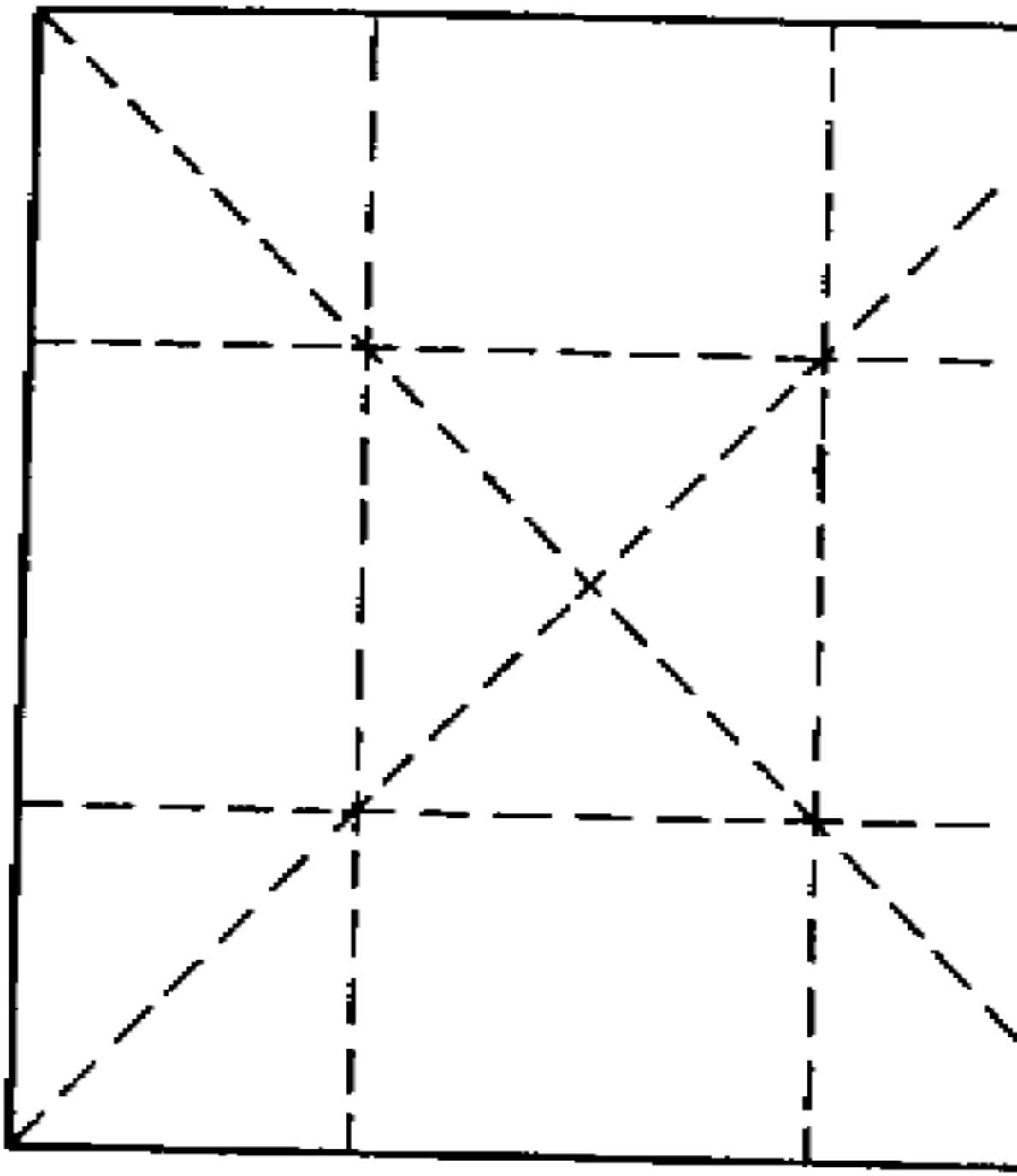


Figure 4–12. Bir

covered vessel containing w
Place a layer of coals over

tic cat before roasting or
meat as fast as possible
toughens over a slow fire.
mals, cut them into small
ceptionally tough, stew i
baking or broiling any typ
When baking, put the fa
and runs over the meat.

(2) *Small game.* Sma
be cooked whole or in part
sex glands before cooking.
and bake it. The clay rem
is broken from the cooked
method of cooking small g
waste. Add taste to the bir
nut, berries, grains, roots (

The stick should be bitte
sap is so sour or bitter tha
the bread. Bread may als
dough into thin sheets on
(dough allowed to sour)
improves the loaf.

4–7. Preserving Food

a. Freezing. In cold clim
by freezing (para 5–6).

b. Drying. Plant food c
air, or fire, or any combina
ject is to remove the water

(1) Cutting the meat
fourth inch strips and dr
smoke will produce "jerky

CHAPT

SURVIVAL IN COLD

5–1. Climate and Weather

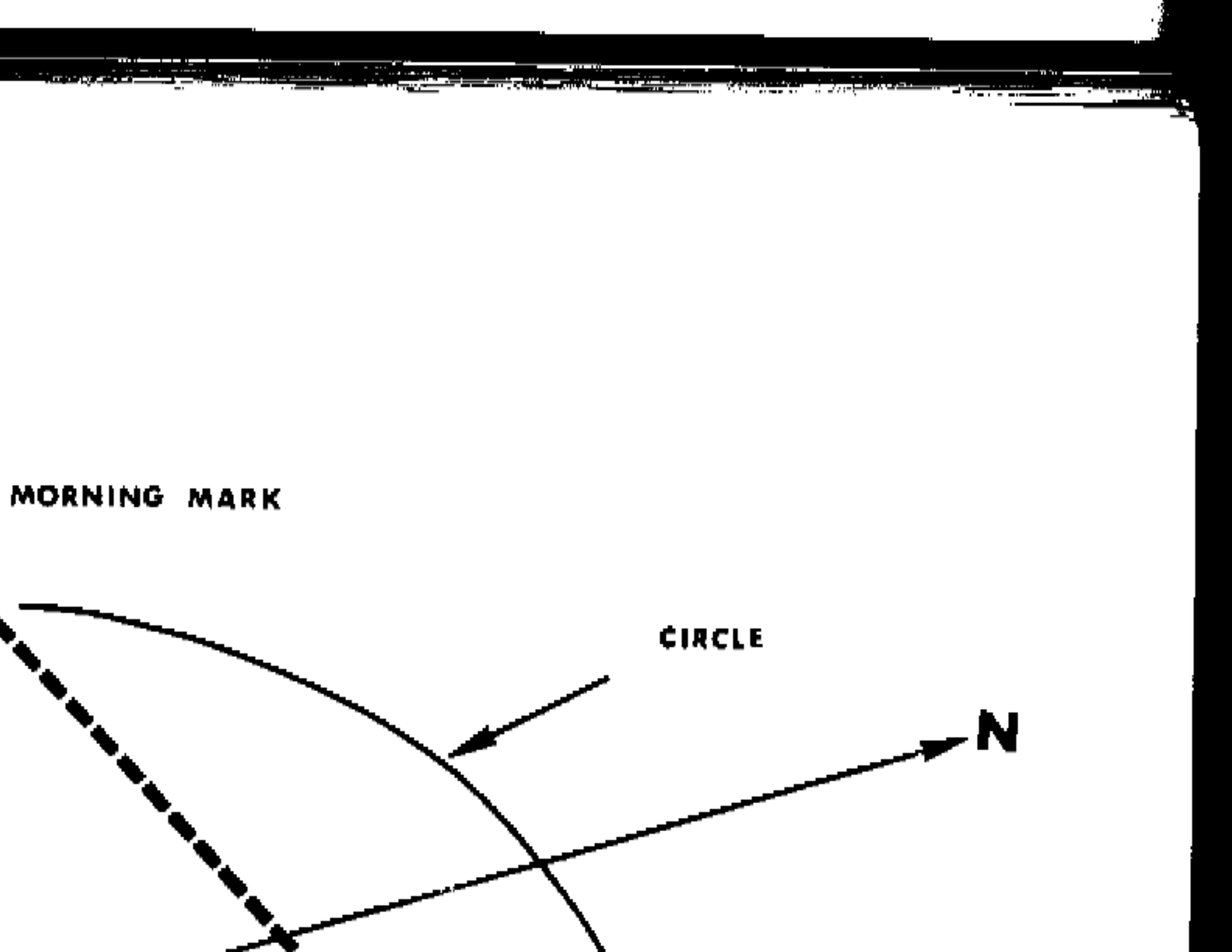
a. Temperature.

(1) *Arctic.* Summer
F. are common except on
Temperatures in winter so
and range up to a maximu

presents the most immedia
in friendly territory, rem
craft or vehicles, and e
emergency code (fig. 2–10)

b. The course should be
tion and the terrain. In
areas, it is advisable to foll
ward populated areas. Si
northward, is an exception.
in Siberia and European
few scattered natives in the

c. When traveling cross
the contour of the land; h
floors are frequently colde
especially at night. Head fo
known point of habitation


MORNING MARK
CIRCLE
N

the bridge by poking ahea
Distribute your weight by
skis or by crawling.

(7) Make camp early
build a shelter.

(8) Consider rivers as
or unfrozen. When rivers a
ly are clear of loose snow
easier travel.

f. The ability to travel
covered terrain is directly
factors:

(1) The ability to use,
over-snow equipment. If yo
training in cross-country s
available, travel on skis is

be considered. A site shou
large trees, because froze
known as "widow makers"
like manner which could b
if hit. A site should be ch
months which is relatively
fuel and water. As protect
better to select a site on a b
that receives an onshore br
near rapid streams are desi
in a situation where concea
tant factor, the site should
and have one or two conceal
it.

c. Types of Shelter. The
pends upon the materials

(3) A house built o
semi-permanent refuge f
The construction of a sno
considerable experience a
ment of the blocks in thi
since the blocks are supp
corners—the two bottom
5–4). The support of th
downward slope of the i
"mystery" in snowhouse
tween blocks are stuffed
snow and finished off with
in with a mittened hand.
binder and becomes strong
blocks. A drawback in con
is the need for tools—knif

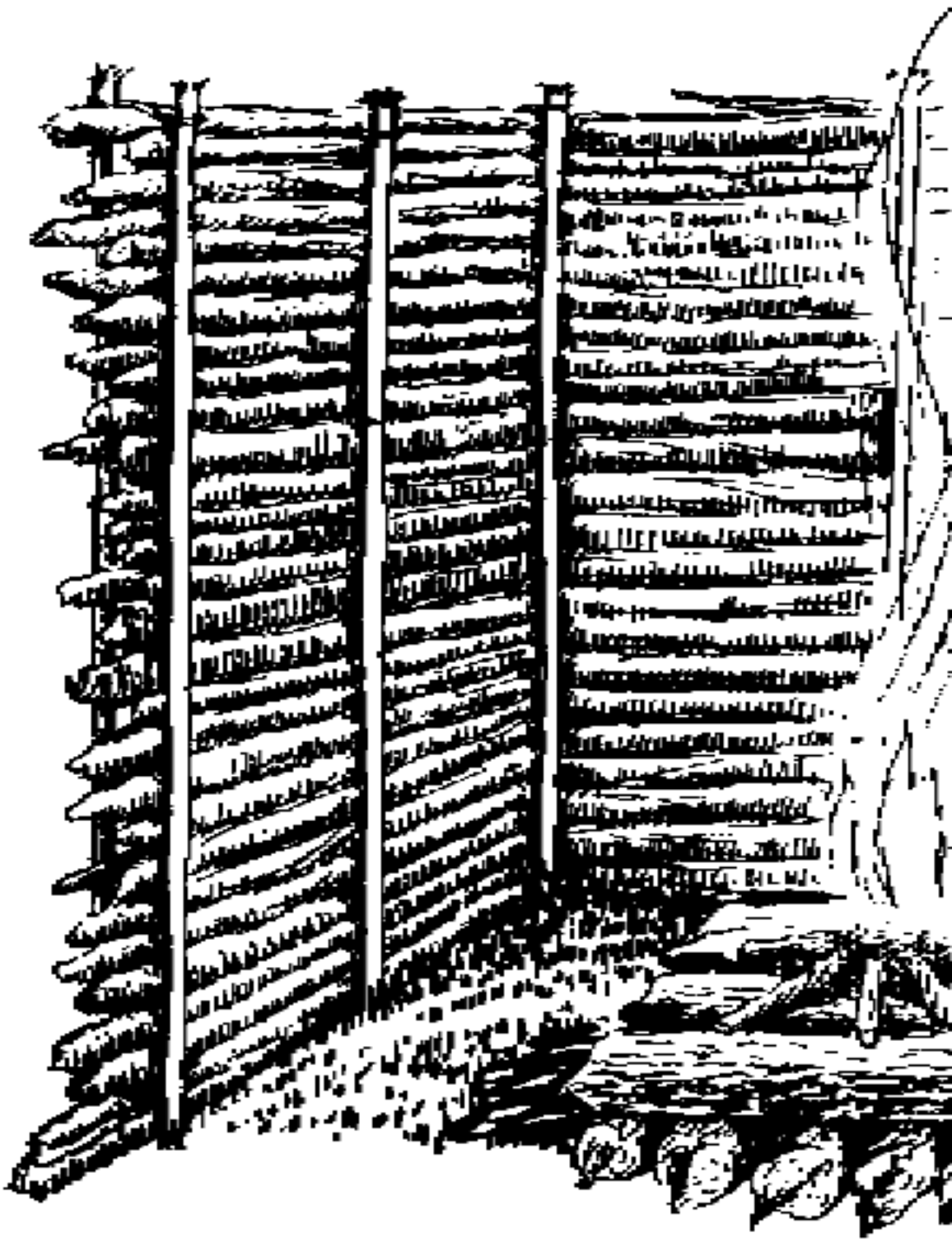
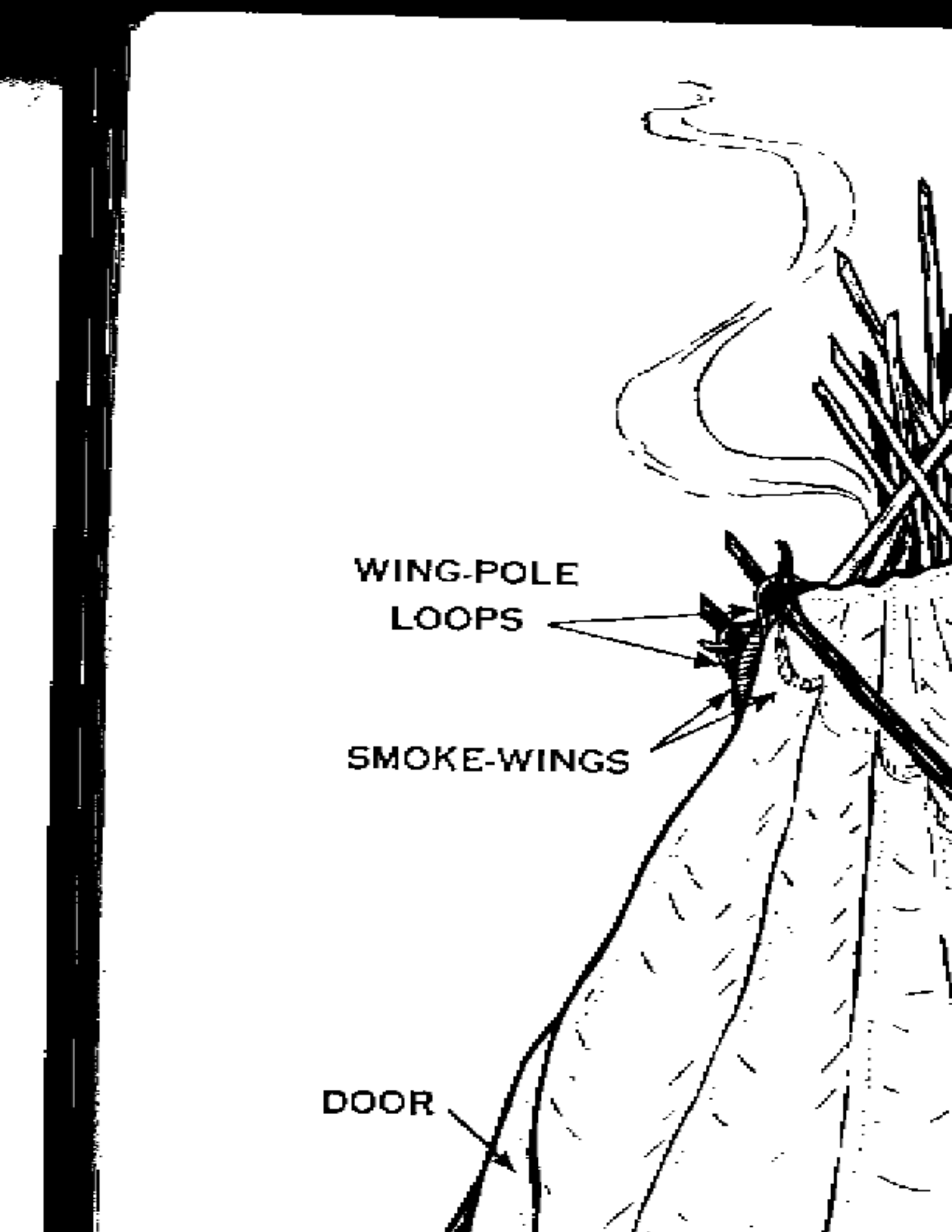


Figure 5–6. Firebr


WING-POLE
LOOPS
SMOKE-WINGS
DOOR

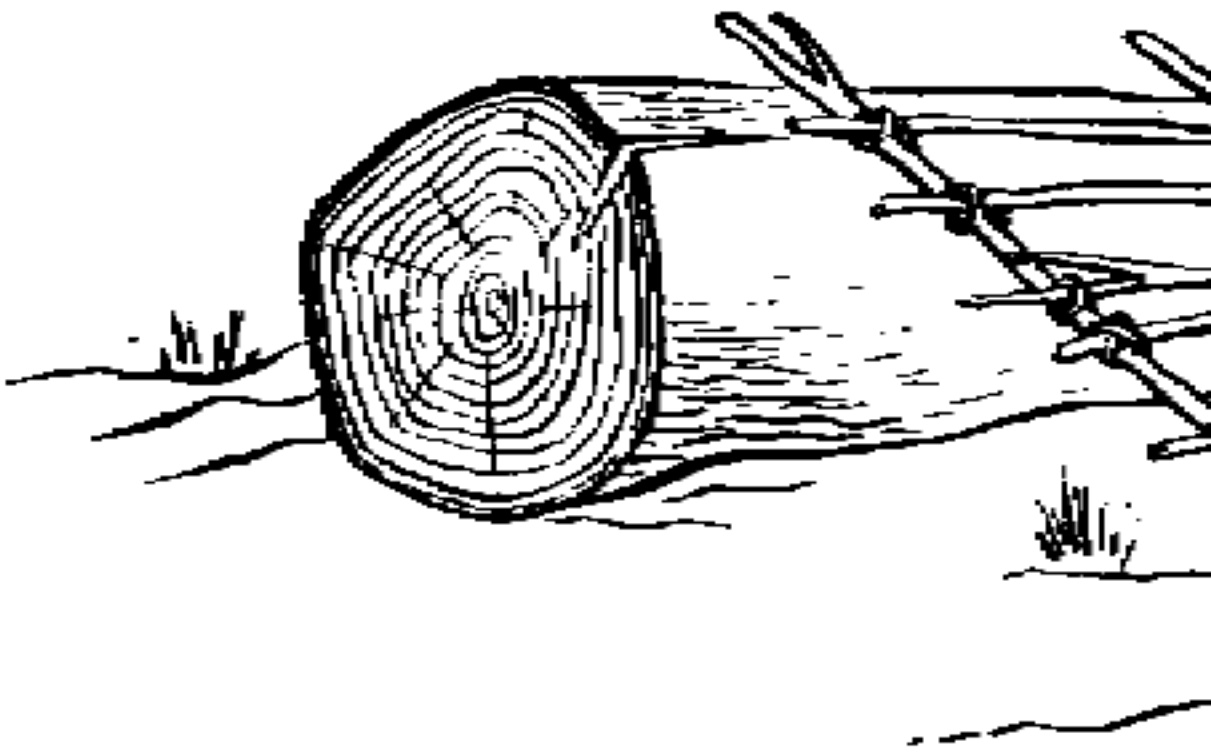


Figure 5–10. I

5–5. Water

a. Thirst is a problem in
winter. In order to conserve
the survivor often deprives
ter which might have been
or snow. The time and quan

weather, freezing fresh
Freeze the meat as quickl
it around outside your sh

(2) During summer
should be kept in a cool
ground will substitute as
by hanging it in strips in
sun can reach it (para 4
at least 15 feet from the
range of flies.

(3) In some areas it
tect your supplies from s
accomplished by hanging
above the ground or by us
5–11).

ern coniferous forests. Th
point or globular in shape

(2) Fish can be spea
caught by hand, or stunne

(*a*) Improvised ho

(*b*) Pieces of meat
be used for bait. Some n
small object that hits the
investigate strips of cloth
Cod may be caught throug

(6) To strand fish wh
up a crescent of boulders o
out the area inside.

d. Land Animals.

(1) *Large land game.*
deer, musk ox, moose, elk, n
bear are found in arctic an

(2) *Small land game.*
found during winter and
others, rabbits, mice, lemmi
fox. Ground squirrels and m
winter; during the summer
along sandy banks of large
like our woodchucks, are f
among rocks, usually near
Farther south, where there

stalked. Keep downwind a
A white camouflage suit he
the animal's head indicates
bearded seal appears to mo
shout; the seal may beco
still, allowing you to shoot
seal stays on floe ice. The s
where ice is broken by cur
cracks. Do not eat the liver
high vitamin A content may

(2) The walrus comes
harder to locate than the
scratch breathing holes in
found on floe ice, and gener
by boat. They are probably
ous animals of the arctic.

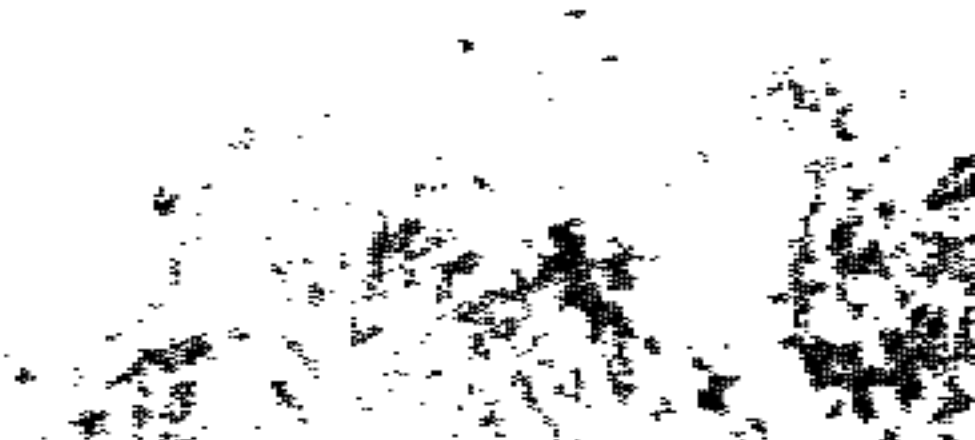
easily approached, travel i
Although hard to locate b
coloring, they provide a g
they can be killed with st
club. Willow ptarmigans
flocks are easily snared. T
low clumps in bottom land

(*b*) All arctic bird
week flightless period in t
moulting. When birds are
down. Fresh eggs are an
and *they are edible at any*
ment.

(2) *Bird traps.* Birds
ety of ways—netted with
from cord, with a baited h

this to thicken soups and st
consists of thin, leathery
one to several inches acro
grayish. The discs are atta
central stalk. This type lich
and brittle when dry (fig.

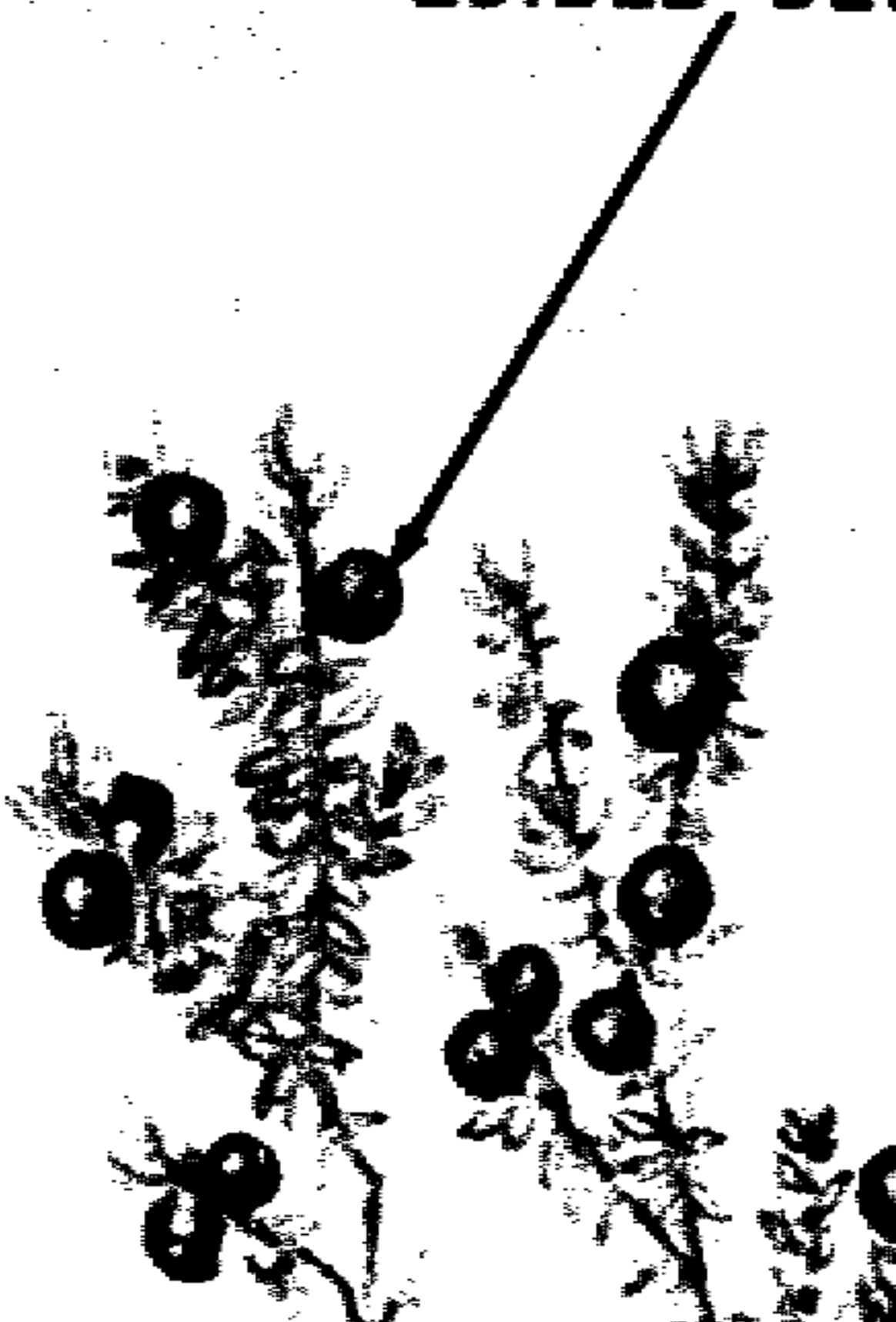
GROWS IN C
-LIKE CLUM



ED

EDIBLE "HIPS"

EDIBLE BE



30 TO 50 FT. TALL

60 TO 80 FT. TALL

BLACK SPRUCE

RED SPR

EDIBLE LEAVES
AND FLOW

EDIBLE LEAVES, ST

blubber, lichens, exposed
grass, and birch bark. In
however, the only fuel m
can be burned in a metal
to ignite the fat. Seal blu
fire without a container i
are available to provide
square foot of blubber wi
Burned blubber cinders a
seal blubber using seal bon
make a little pyramidal
saturate a small rag with o
light the rag, place it insi
the blubber carefully on t
melts the oil from the pie
drips on to the heated bon

They can be warmed by
warm flesh under the arm
or against the ribs. Feet, b
readily, are difficult to kee
fortable, however, by wea
for you to wear at least t
keeping the feet dry. A
made by putting one pair
and filling the space betwe
dry grass, moss, or feathers

(4) It may be neces
articles of clothing like bo
if your boots are too small

Do not apply snow or
blistering and peeling ju
break or open blisters. Ch
if you have a companio
symptoms of frostbite.
invite gangrene.

c. Insufficient rest and
contribute to the risk of
toms of advanced gener
weakness, fatigue, stiffness
ing drowsiness. The victim
falls, and becomes uncon
something hot to drink. Tr
ly rewarm any frozen par
sion in warm water (90° F
warm hand on the frozen

e. The danger of suffoc
is a great hazard in the
extreme cold, the desire t
often overrules common
clothing to keep you warm
shelters, use fires and heat
type fuel burning for as
poorly ventilated shelter
amount of odorless carbon
tion can be provided by lea
open, providing another
close to the ground (door
by building a draft tunne
the floor and has an open
draft of the stove draws f
of the tent into the tunne

dians are found along
interior. Arctic natives,
enough to eat, so do no
hospitality. Offer paymer

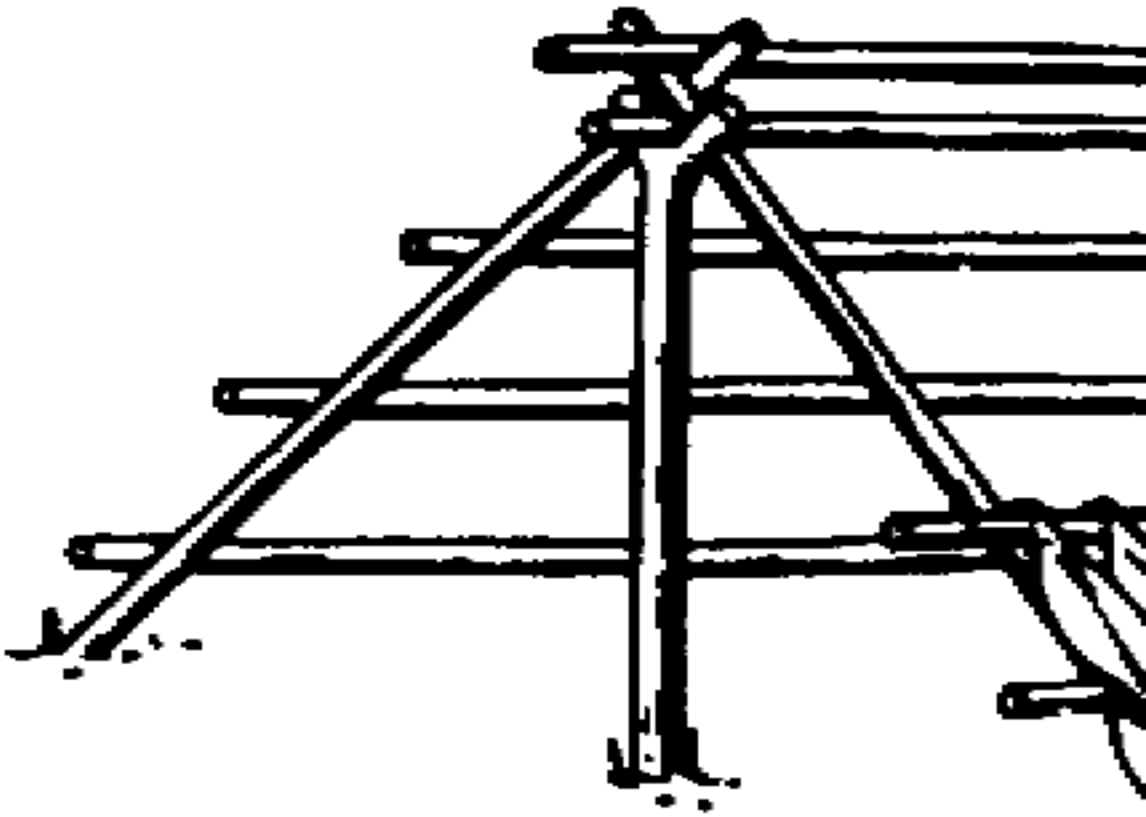
e. Dry scrub country
jungle but is difficult to
its lack of topographical
tracks. It can be traversed
pass, patience, and comm

6–2. Travel

Travel can be conducted
do not panic. If alone in
the circumstances, the fi
think the problem out. Yo

a. Pinpoint your posit
sible to determine a gener
If a compass is not availa
tion with a watch as an a

b. Take stock of water



cultivated fruits and veg
are fertilized with human
of infection. Never eat th
raw unless you have peele
off the outer surface with a
before eating them.

b. Fish. There are some
waters, but many species a
to eat are those from the o
yond the reef. The enterpri
himself along the beach b
snakes, lobsters, sea urchi
Suckers abound in most t

(1) Eat only small po
ill effects occur, it is safe to

(2) Tropical fish spoi

of this plant, especially
(fig. 6–6).

(5) *Pangi.* This plan
Malayan jungle. Its seeds

which are poisonous and
(fig. 6–9).

(8) *Strychnine.* The
throughout the tropics. T

6–7. Clothing

Unless completely covered
to leeches, insects, scratch
should have—

a. Clothing loose enough
and socks.

6–8. Health

a. General. Do not expec
remain alive in the jungle a
body strong. Even under
difficult, but the chances ar
mon sense rules.

(2) *Dysentery.* Cau
drinking water.

(3) *Sand fly fever.*
to malaria. Give plenty
mouth and have the p
abates. If aspirin or "
tablets every four hours
three to four days.

(4) *Typhus.* There
phus found in tropical
flea-borne, louse-borne,
The general symptoms a
ness, fever, and generali
tims usually have a dusk
may not develop a pink

c. Follow the easiest r
loose sand and rough t
trails. In sand dune are
valleys between dunes, or
d. Avoid following str
cept in coastal desert area
rivers flowing across ther
lead to an enclosed basin
e. Dress properly for
sunlight and excessive ev
If sunglasses are not av
(fig. 5–39). Clothing is ne
desert because cool nights
f. Care for the feet. Be
travel. Cross sand dunes
weather; otherwise, the sa

overemphasized. It is esse
adequate your food supply
a minimum of one gallon
spiration is controlled an
during the cool desert nig
20 miles on that gallon.
day, you might travel 10 m

b. Conserve Water.

(1) Keep fully clothe
perspiration by not letting
rate so fast that you miss s
You may feel cooler witho
spire more and sunburn is

(2) Do not hurry. Yo
less water if perspiration is

(3) Do not use water

considered a water source
4). The large barrel cactu
also contains considerable
squeezed out of the pulp. T
task. The best alternative i
(para 3–15).

(8) Disregard the rom
wells. These stories genera
bad tasting water that cont
nesium.

(9) Treat all water. T
tant in native villages and

7–5. Food

a. General. Food is diffic
Food, however, is secondary

SHRUB 10 FT.
TALL

Drink plenty of water whe
ticularly at mealtime. If yo
you tend to dehydrate be
stored to normal after eat
ever, you will often feel t
energy by dehydration.

(2) Efficiency lost by
quickly by drinking water.

(3) No permanent har
tion, even up to 10 percent
pounds, 15 pounds can be l
provided you drink enough
back. Cold water will cause
lowed too rapidly.

(4) You can survive a
if air temperature is 85° F

CHAPT

SURVIVAL

8–1. General

a. Causes. There are ma
find yourself faced with th
sea. The ship or aircraft w
be sunk or downed by natu
collision, or by enemy actio

b. Fish.

(1) *General.* Practic
fish are palatable and wh
warm regions, gut and bl
catching them. Cut fish
diately into thin narrow
dry. A well-dried fish sta
Fish not cleaned and drie
Never eat fish that have
eyes, flabby skin and fles
Good fish should show th
Sea fish should have a salt
Eels are edible, but may
(para 2–19*e*). The heart,
liver of fish are edible.
cooked. Also edible are th

or boat. Use the heaviest
and cut three notches in
Lash them in place at a
shaft and drag the grapp

(5) *Bait.* Use small
larger fish. Use the dip ne
scoop up these small fish.
a net from a mosquito he
clothing fastened to oar
der water and scoop up
and fish for bait. Use a pie
tin, or even a button from
moving in the water to
it at different depths.

(6) *Fishing at sea.*
while fishing at sea :

(2) There are relativ
Atlantic, and these are
coasts. This is also true
southern waters, many sp
seen hundreds of miles fro

(3) Gulls, terns, gan
be caught by dragging a
within shooting distance b
or shell dragged behind t
catch a bird if it lands v
however, are shy and will
reach. In this case, try a bi
a loose knot with the two
figure 8–2. Bait the center
trails or similar bait. Whe
the noose around its feet.

distances. This fact is in
in heavy fog or at nigh
driftwood or vegetation n

8–5. Care of a Rubber Raf

a. General. The chances
downed aircraft are perh
survivor of a sunken ship
carry rubber rafts. Know

b. Proper Inflation. Pr
the main buoyancy chamb
pump or mouth inflation t
they are provided, unless t
must lie flat. Do not overi
well round but not drum t
some air because hot air exp

erating that come with it.
fore using the radio.

(2) *Signaling mirror*

(3) *Lights and flares*
of signal pistols, flares, s
lights (normal lifeboat e
watertight containers hol
lantern and flashlight are
can be used for signaling.

(4) *Signal flags*. The
ing the signal flag is for t
by holding each end and m
of color. Signal flags flown
from great distances.

(5) *Boat cover*. Whe

reach across and grab th
Slide back into the wate
and over. Most rafts hav
bottom. Twenty-man raft
they are identical on both s

(4) To board a one-
the narrow end, remaining
possible. This is also the pr
place rafts when alone.

(5) If there are severa
be tied together. Tie the
the bow of the second, an
stern of the second raft. Us
feet long between rafts; adj
so that when the raft is at
sea anchor will stay in a tro

This
Intentio

foreign terrain possibly
time and with little or no f

b. Evasion aids are item
for the specific purpose o
personnel evading the ene

9–3. Basic Principles

a. Successful evasion d
the ability to—

(1) Prepare a detailed
(*a*) Evading the en
(*b*) Survival.
(*c*) Returning to fri

(2) Observe the eleme
camouflage, and concealmen

(3) Take your time: h
increases weariness and dan

c. Disguise. As an evad
desirability of disguise.
the expectation of passing
hazardous and should be
racial or ethnic characte
those of the people in the
area where racial differen
the mannerisms of walki
unfamiliarity with the
arouse suspicion, leading
sible capture.

(1) Under establishe
are considered a belligere
as the national uniform
sidered to be under orders
to surrender voluntarily. T

tures should be avoided. S
certain to come to the
searching for an evader.
type are condemned in
climate may leave little ch

g. Progress. Progress o
in stopover points reache
of secondary importance.
a precise schedule inhibit

9–6. Obstacles

Throughout the evasion e
be encountered which may
selection of travel routes
divided into *natural ob*
streams, or mountains, and

(*e*) Unseasonal disc

Note: Without prot
accessories. by-pass these area

c. Border Crossing.

(1) The crossing of
sents a major problem. Bo
in any type terrain.

(2) In areas where th
rain feature to indicate t
stacles such as electrified o
mented with trip wires,
flares, may be encountered
trolled by men or dogs, or
the hours of darkness.

(3) In open terrain,
floodlights and plowed st

a direct approach of front
require crawling through t
tions to a position near fo
This action should be accon
of darkness. Once near fri
not attempt to make contac
light for you to be recogn
contact with a friendly pa
typically American and wa

e. Rescue by Aircraft. If
fixed wing aircraft is likely
distress code and methods
(fig. 2–10). Ground-to-air s
arranged so that they can b
notice since enemy aircraft
immediate area.

9–8. Payment of Blood C

See FM 21–77A.

9–9. "Pointee Talkee"

a. The "pointee talkee"
contains selected phrases
the page and the foreign
the other side. Determine
to be used in the English
foreign language counterp
will point to the applicab
guage; you then read the
9–2).

b. "Pointee talkee" phr
the following eight subhea

IN

FIRST SHOW NATIVE
THE OPPOSITE PAGE
PERSON WITH WHOM
TRYING TO COMMUNIC
WILL EXPLAIN TO HIM
POSE AND USE OF TH
BOOK.

THEN FIND THE
WHICH YOU WISH TO
POINT TO ITS LANGUA
TERPART. IN REPLY TH

250

1. GLAD TO MEET YOU. 1.

2. IT IS TIME FOR ME TO LEAVE NOW. THANK YOU! 2.

CHAPTE

SHORT-RANGE

10–1. Special Aspects of Sho

a. Short-range evasion
relatively near friendly area
of units or individuals wh
from their parent unit.

b. The principles and aids

10–7. Other Alternatives

a. Any other course of
ture is justified as long as
ing rules of warfare. You
war criminal if such rules
if a hostage is killed who i
purpose of escape or evas
emblem is misused to gain
are not entitled.

b. A combination of any
might be the solution for a

10–8. Evasion Techniques

a. When evading alone
fear and shock, and think

(3) Occasionally, it i
surgent force to take selec
ganda purposes; but nor
cannot afford to allow pr
its movement. Even when
the insurgent force often
will it follow, the provisi
vention regarding the trea

(4) Since most insur
veloped areas of the worl
are located in tropical or s
viral presents problems pe

b. Long-range patrols,
reconnaissance units, and s
which frequently penetra
ritory are also potential l

11–3. The Will to Survive o

a. Knowledge that you
dreds of miles over a perio
discouraging. Therefore, a
gether with an ability to
overcome obstacles, are ma

b. The determination t
tained at times by sheer wi
recognized that many of
come are *mental* rather tha

as detailed as knowledge o
permit, and flexible enou
circumstances.

a. If captured, plan for
sion concurrently with esc
and extent of the evasion
custody vary according to
information available co
and the evasion area. Info
cape committees (para
limited to complete infor
curity measures, checkpo
customs of the people, and
areas where U.S.-sponsore
erating (para 12–9). In so
area may be available. Ag

passing through populated a
before reaching a decision
of action.

11–11. Collecting Enemy Info

Because of your military bac
intelligence officers will rate
source of information. Do n
personal safety or compromi
purpose of collecting infor
observe and memorize in as
enemy strength, equipment,
organization and movement–
Battle intelligence. Do not
information found on the per
espionage.

12–3. E&E Lines

An E&E line is a system
organized to contact, sec
evacuate friendly person
supported lines normally
the following assistance:

a. Temporary shelter,
the next phase of the journ

b. Clothing and credenti
to be traveled.

c. Information concerni
ures along the evasion rout

d. Local currency and t

e. Medical treatment.

f. Available native guid

developed. If the E&E syst
fully, the spotter will know
will search the immediate
visits to designated contac
signs and countersigns, if u
the preoperational briefing.
to seek first contact in a vil
are conspicuous by day, an
or other security measures d
ness. The time of contact s
the daylight period or short
will add to the chance of es
prove to be unfriendly, and
the contact in providing fu

c. Procedure After Conta

you may be told to remain

of the journey. For securit
the compartmentation of t
should be revealed. It is a
a line leads or how it will e
territory. Do not try to lear
addresses, and above all, d
any other information in w
sion of having received no
habitants.

a. Fellow Evaders. Cautio
of fellow evaders on an esc
personally known. Even wh
torily determined that an
evader, no information shou

b. Travel With Guides. I
should not be apparent to

heroic. At times it is ur
the result of injury. Ex
that a majority of those
could have avoided captu
sion tactics. Case histories
made no attempt to avoi
stances, withdrew from t
were captured.

b. If captured, you mu
to develop and execute a
ciple is clearly stated in
Conduct.

13–3. Communist Handling

b. Prisoners usually ar
column. The guards ma
and not trained in guardi
be passed along for each
column. At the first ben
one part of the column r
guards.

c. If being evacuated by
may halt the truck, ther
jump. If the guards are r
to jump out when the truc
ing a hill. Motor movem
usually are made at night
All conditions of poor or
darkness, rain, fog, or clo
cape.

CHAPT

PRISONER OF

Section I. ORGANIZATION

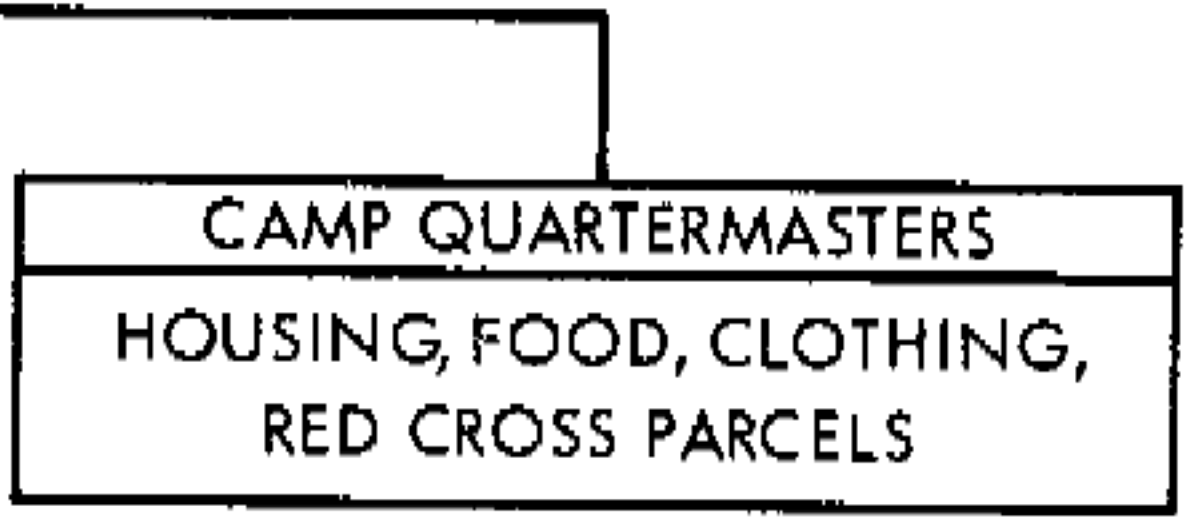
14–1. General

a. Unless prisoners with
ganize, they cannot hope
health, and morale at a le
resistance to enemy indoct

military authorities of t
Protecting Powers, the I
the Red Cross, and any
which may assist the pri
function, prisoners' repr
should set up a workable
capable of insuring the h
tions for the prisoners. Th
establish programs to m
physical fitness of men.

(3) *Senior in comm*
resentative. It is probabl
aware of the U.S. Code c
and responsibilities of the
Forces in the prisoner of
where there are prisoners

N COMMAND


CAMP QUARTERMASTERS
HOUSING, FOOD, CLOTHING,
RED CROSS PARCELS

tion of large or small gro
removal or death of a com
by the prison authorities a
overt organization and app
of their choice. The comm
levels of the overt organiza
for the disruptions by des
command and appointing a
personnel. The latter may r
job training to insure thei
sponsibility without prior
thorities attempt to appoi
own choosing, the comma
protest this action to the pr
duty of all prisoners to d
to the deposed leaders and

14–7. Physical Restraint

See FM 21–77A.

14–8. Medical Treatment

See FM 21–77A.

Section III. SURVIVAL WHI

14–9. The Will to Survive

There is nothing more im
the will to live and resist.
tion, the poor living co
the enemy authorities migh
your mind to endure it.
chances of survival as a p

or stone or some other ha
is a good morale booster.

(4) *Save* your streng
around the compound o
keep the muscles toned. G
you will not get much rest

b. Add To.

(1) Use your ingenui
you cannot do without a
example, rations. Many ec
around the compound. W
movement within the co
food native to the area. S
discussion of edible food. I
grasses, leaves, barks, an
cache. They will keep you

CHAP

ENEMY INT

15–1. Purpose

This chapter discusses
enemy interrogation an
coping with these situatio

15–2. Conduct of Prisone

The first line of defense

CHAPT

ENEMY INDO

16–1. Purpose

The purpose of this chap
indoctrination methods wi
that can be used to resist
methods described are bas
U.S. prisoners in the hand

ship of the subverted ex
to support the communi
communist party.

16–4. Other Objectives

a. In support of these
jectives, there are specifi
internal control of the pri
munists organize a net of
camp authorities informa
ties of other prisoners.
enemy is able to break up
formers also are expecte
concerning prisoners who
doctrination.

b. Another objective is

b. Harassment. This
employed on an exact s
from day to day, week t
Its purpose it to create
you tense and constantl
ducted in such a way a
harassment will end eve
then be able to live as no
Harassment usually is ba
prisoners. These charges
very minor infraction of
such as striking an enem
and is designed for, pri
offenses in connection wi
gram.

c. Humiliation. Humil

CHA

ESCAPE FROM PRIS

Section I.

17–1. Escape

Capture by the enemy d
fulness. You are duty bou
portunities to escape. T
tempting to escape, you
active soldier and may al

c. Tunnel operations re
with the greatest security r
is especially true of tunnel
purposes.

d. A major problem in t
posal. In most cases, the di
is different in color from t
pose of it, carefully blend
around the compound.

e. Dirt may be secreted i
but care must be taken to a
through the cracks that co
possible, move tunnel dirt
posal. This may be done by
compound daily. They ma
camp shoring material and

production, consider conve
into a usable collection of t
is the ingenuity and skill of
Some tools useful for es
saws, drills, chisels, wire
knives, graters, fishhooks,
pliers. With enough talent,
sense, all of these tools can

Section IV. ESCAPE

17–9. General

Escape is only the first pha
After escape, the problem o
territory to a point of safet
away must be considered.

ten and vary from dist
worded and imposingly
serve the purpose.

17–11. Methods of Produ

a. The time required t
on the size, number of p
lettering, and the condit
produced. The equipment
inadequate, usually being
inferior nibs and brush
provised drawing instru
however, and wood or co
tain shades of color from
These may be used to s
appearance of age.

can be produced will var
but about 25 satisfactor
made. The gelatin can be
used again.

c. Wooden block printi
ber shoe heels will provi
wooden block. Trace or d
the block. Carve the woo
leaving the traced lines as
block. Then cover the ima
any greasy ink, or ink
wheat) base. Press a sheet
the block and transfer the

17–13. Photographs

poured and allowed to co
trimming with a knife or fi
ing as appropriate.

17–16. Clothing

Under certain circumstanc
be useful. Travel as an ene
to military restrictions an
guises have worked in th
numerous foreign worker
conditions of clothing mak
of the regular uniform.
trousers, coats, and caps t
stitutes. Permanganate of
violet (obtained from the d
ink, coffee, tea, and colored

formations will aid in the

b. If inclement weather
held indoors and the coun
it may be possible for a co
your room. A trap door
tween rooms for this purp

c. Discovery of absence
sometimes be avoided by
bed. The bed should be a
the room and behind a t
where a lazy guard is like
check.

d. Substitutions may b
pounds within a camp i
simultaneously and if pas
is possible. Individuals suc

APPEN

REFER

AR 350–30	Code
AR 350–225	Survi ing.
FM 5–13	The F
FM 5–20	Camou
FM 21–11	First
FM 21–20	Physic
FM 21–26	Map

APPEN

WILD PLA

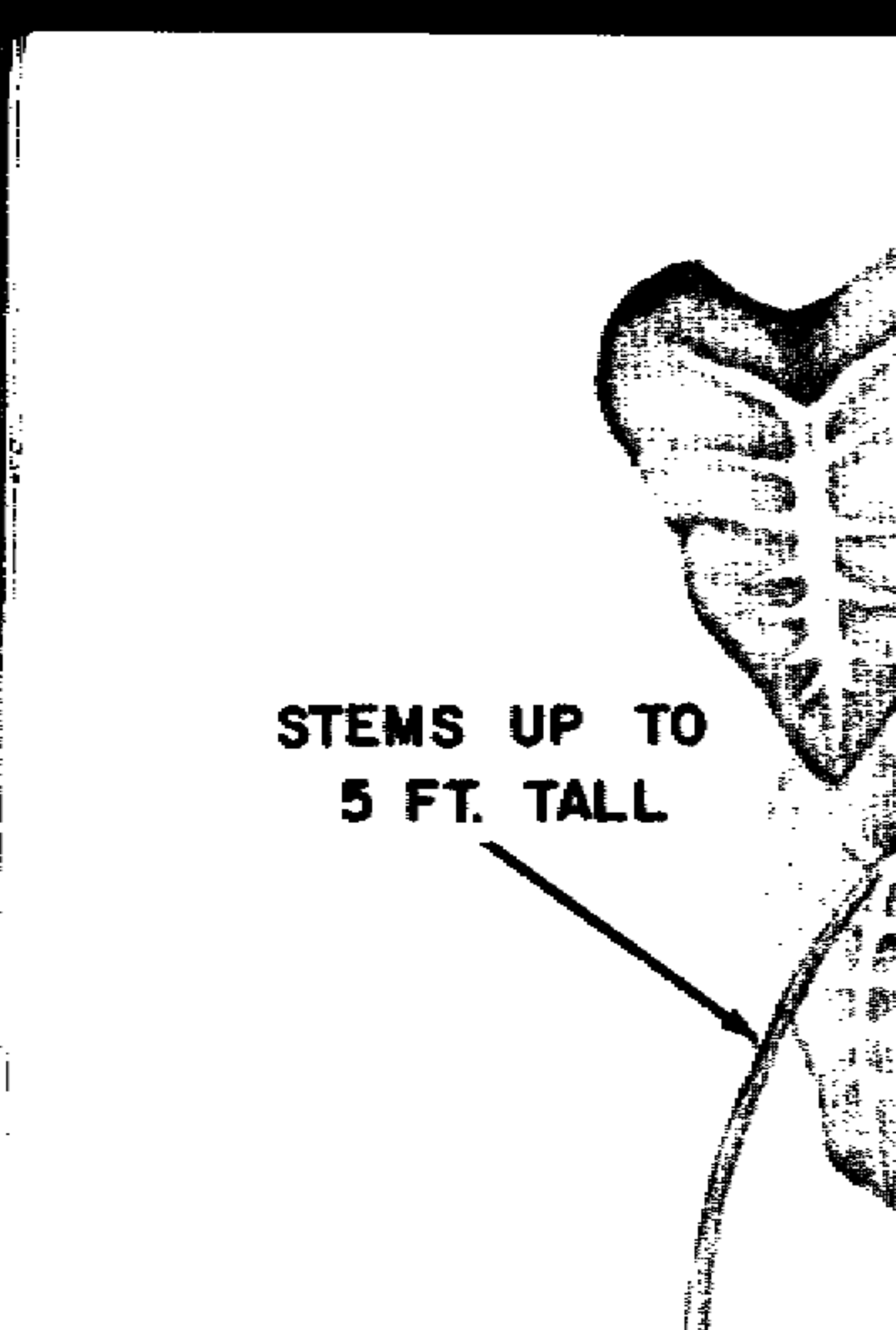
B–1. Roots and Other Unde

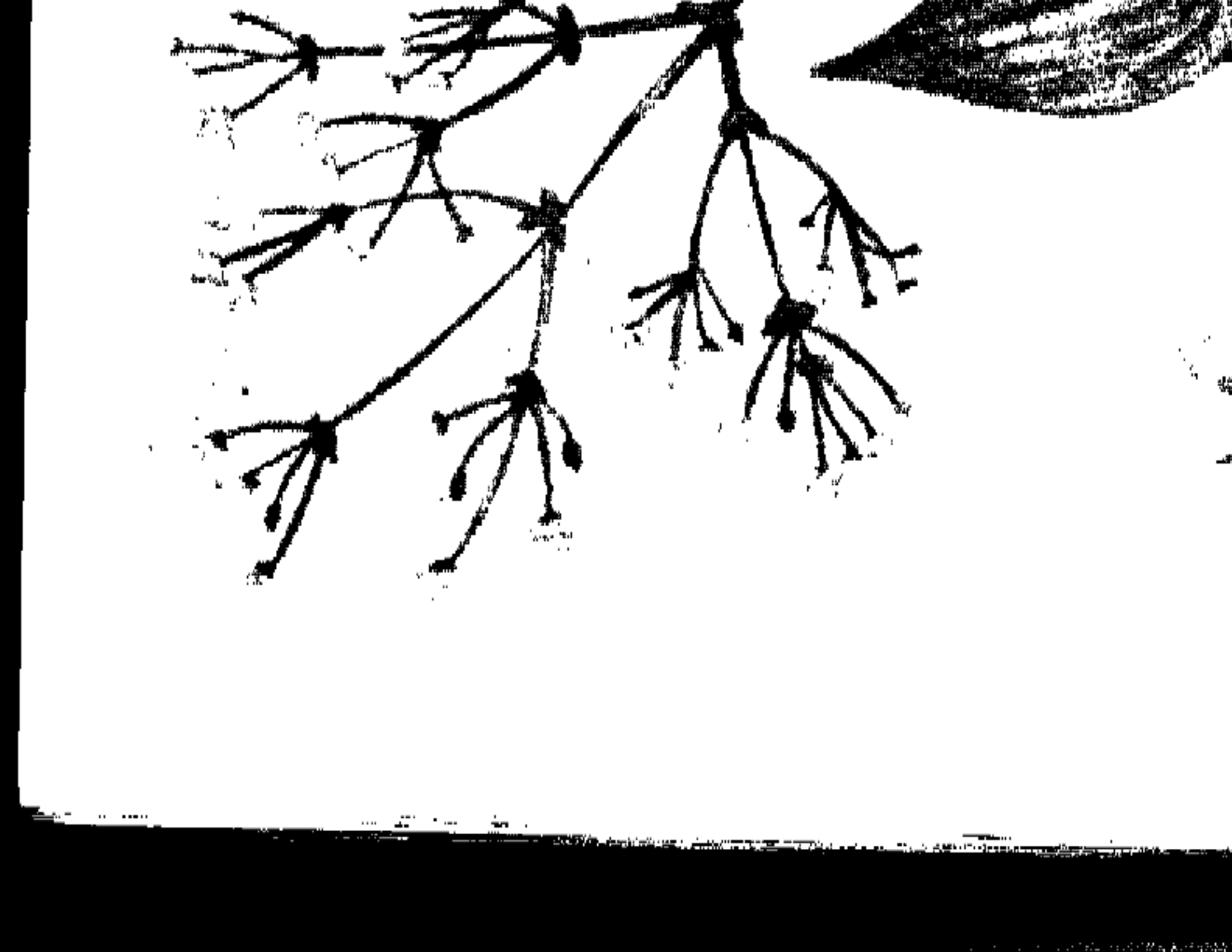
These starch-storing foo
stalks, and bulbs.

a. Tubers. All tubers are
and must be dug. Cook the
(para 4–6).

(1) *Wild potato.* This

Nut grass differs from tr
three-angle stem and thick
grow one-half to one inch
are sweet and nutty. Boil,
flour. This flour can be u
(fig. B–4).


STEMS UP TO
5 FT. TALL



TREES UP TO 9 FT. HIGH


BROAD-LEAVED
VARIETY

desert plant, but also gro
The mescal, when fully
leaves with stout, sharp ti
center is a stalk that rise
flowering head. This stalk
Select plants having flo
roast the shoot. It contai
layers that taste sweet (f

b. Wild Gourd or Luf

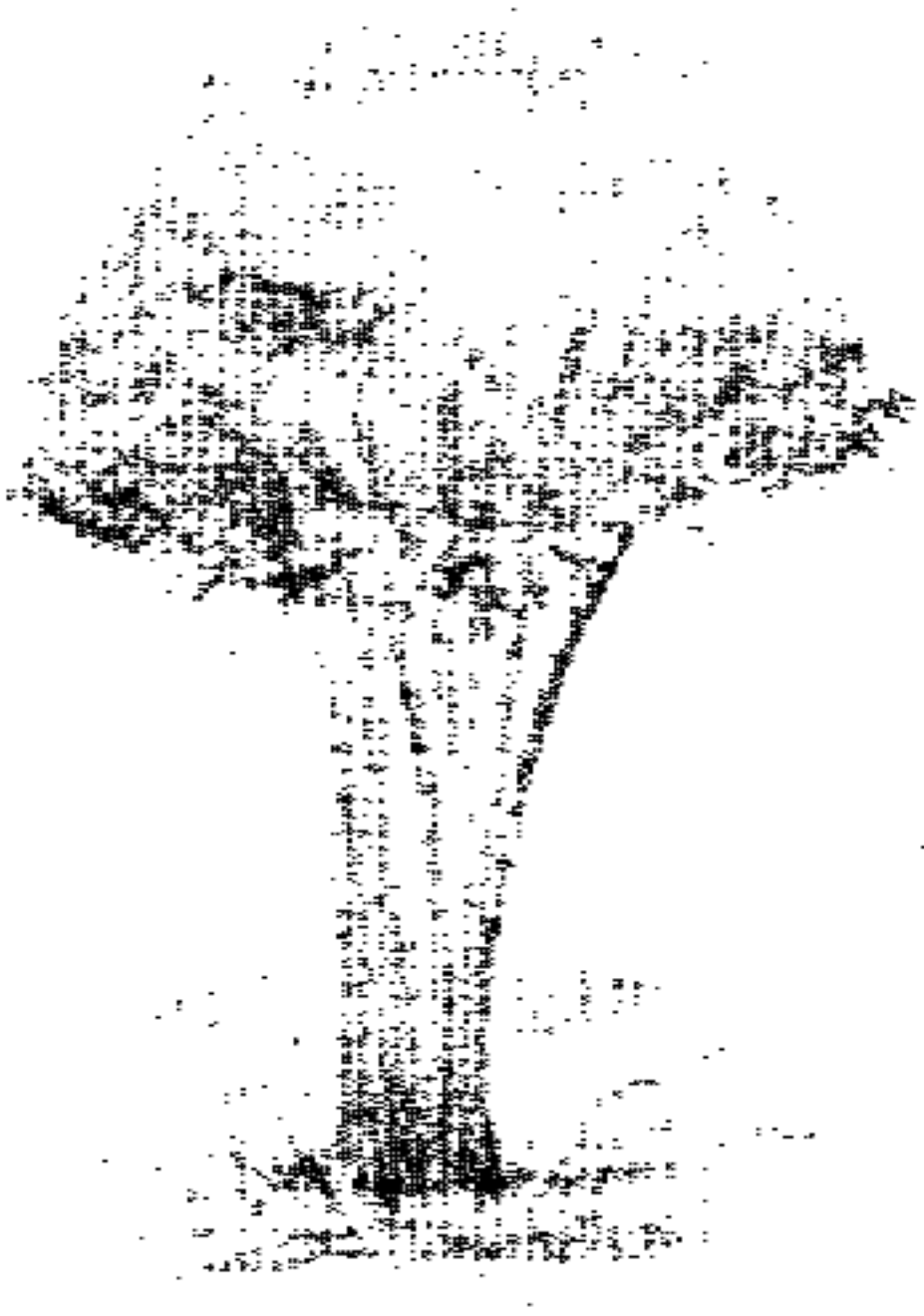
member of the squash fa
watermelon, cantaloupe,

EDIBLE SH

c. Wild Desert Gourd. squash family, this creeping in the Sahara Desert, Arab ern coast of India. It pro long that runs over the g grows to about the size are edible roasted or boiled eaten, and the water-fille chewed (fig. B–16).

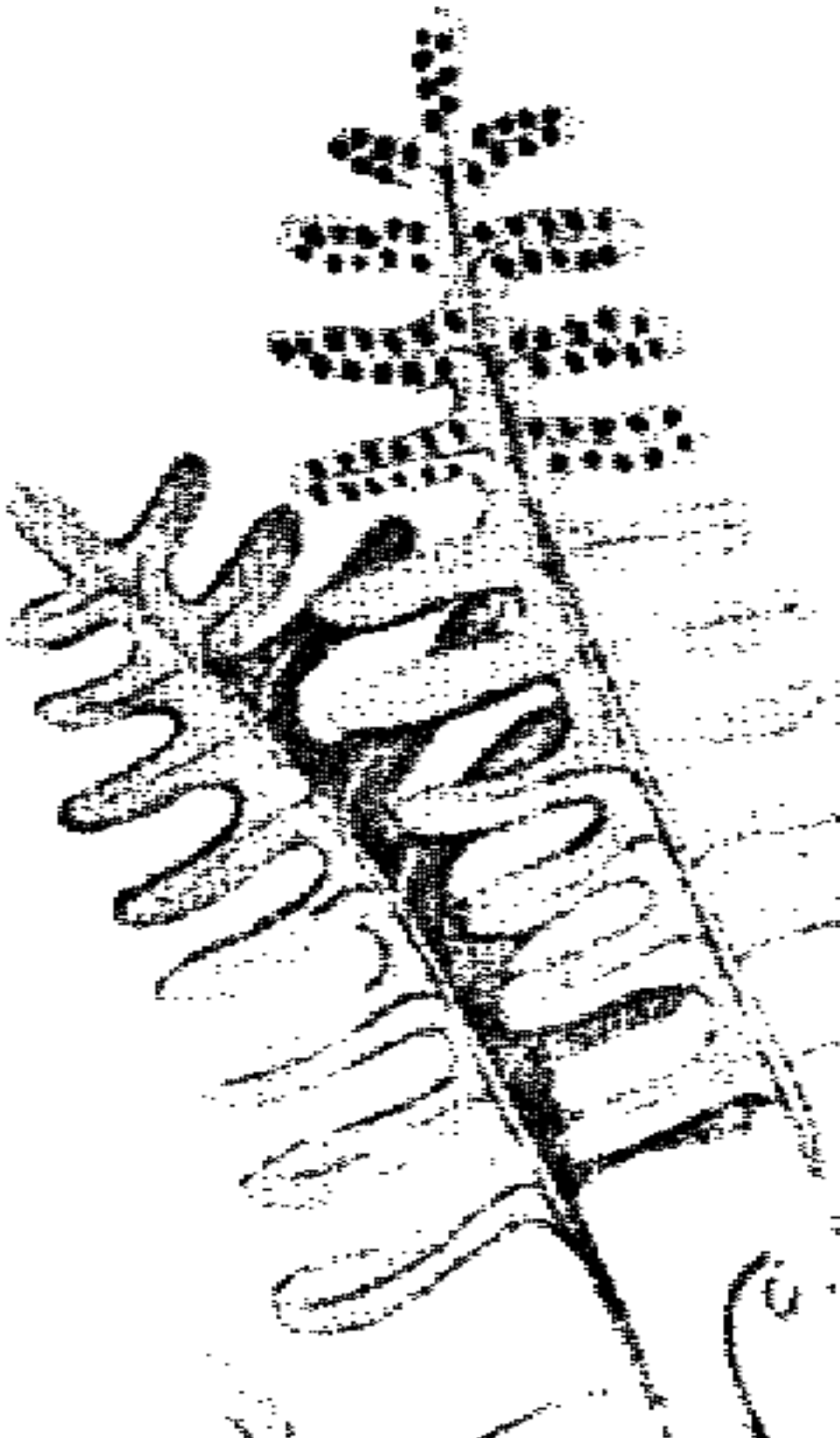
d. Bamboo. This plant g of warm temperate and tr in clearings, around aband est, and along rivers and bles corn and sugar cane remembered for its popul

ED



20-80 FT. TALL

POLYP

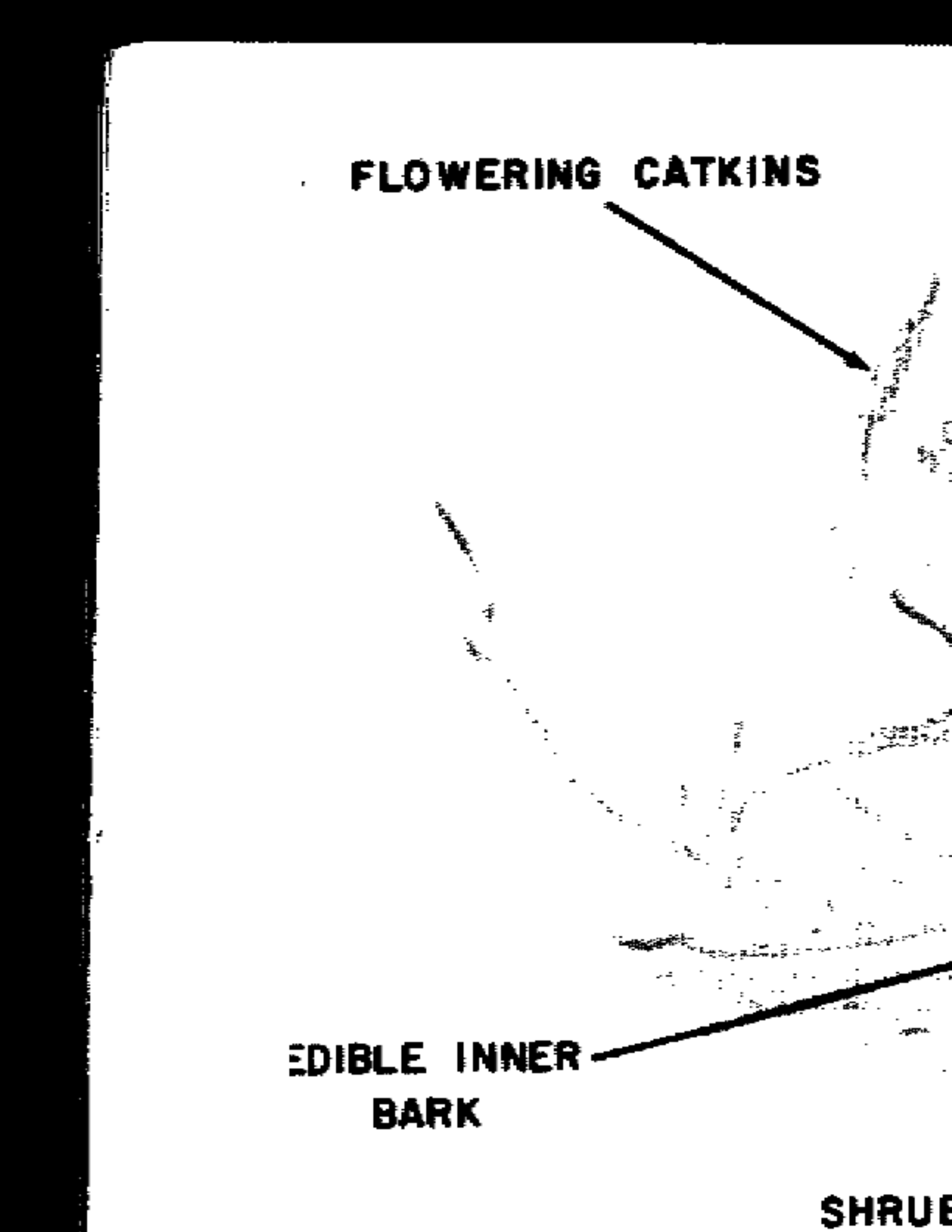


EDIBLE
FLOATING

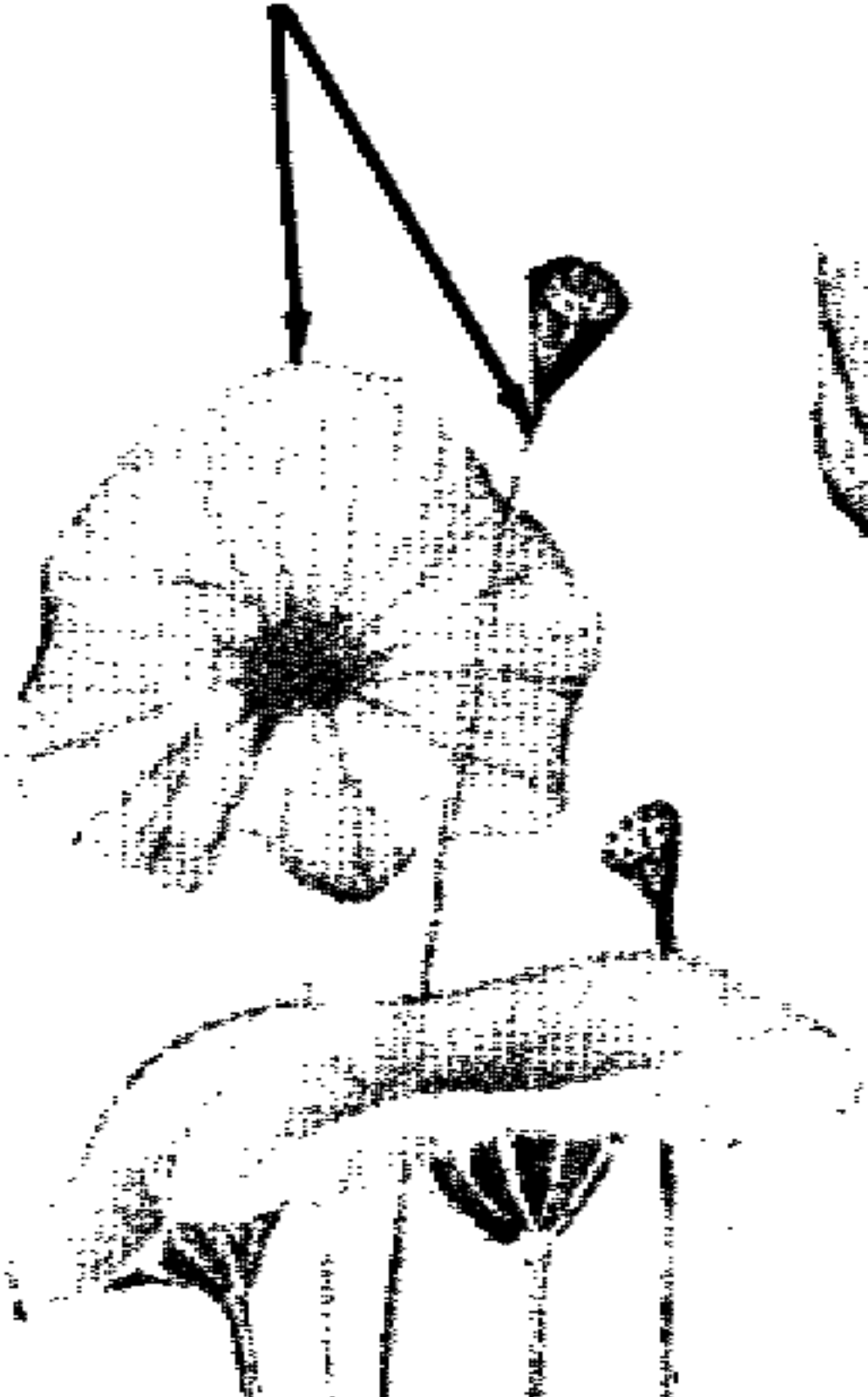
fresh. The roots of this pla
ground for seasoning mu
radish (fig. B–22).

f. Wild Dock and Wil
plants are native to the M
abundant in both tempera
and in areas having high
Look for them in fields,
waste places. Wild dock i
of its leaves at the base o
produces a very small, gre
cluster of flowers. Wild so
but similar in appearance.
are arrow-shaped and co
leaves of both plants are

EDIBLE LEAVES


FLOWERING CATKINS
EDIBLE INNER
BARK
SHRUB

YOUNG LEAVES AND STEMS EDIBLE



TREES 3

EDIBLE

temperate zones are waln
almonds, hickory nuts, ac
nuts. Tropical zone nuts
nuts, cashew nuts, and m
are some edible nuts:

a. English Walnut. In
found from southeastern
China. It is abundant in
on a tree that sometimes
leaves of the tree are divi
istic of all walnut species
closed by a thick outer hus
to reach the hard inner s
kernel ripens in autumn (

b. Hazelnut (Filbert).
wide areas of the United

nut is boiled, mash it li
(fig. B–32).

d. Almond. Wild alm
desert areas of southern
terranean area, Iran, A
Azores and the Canary
resembles a peach tree a
tall. The fruit, found i
looks somewhat like a gr
its stone (the almond)
wooly skin. To extract
fruit down the side, and
Gather and shell them i
reserve (fig. B–33).

e. Acorns (English O
ties of oak, but the Eng

FLOWERING BR

TREE UP

most useful in the drink
the drinking stage, split
the meat with a spoon
husk. In the mature stag
meat, and eat it fresh, gr
the milk stand for a sho
separate from it, makin
drink.

(3) Sprouting cocon
and split them open or
Eat the white spongy m
the purgative or physic
it before eating (fig. B–38

k. Wild Pistachio Nut.
pistachio nuts grow in
surrounding the Mediterr

TREE UP TO

taken when roasting or b
cause the steam or smoke
permanent blindness (fig. I

B–5. Seeds and Grains

The seeds of many plants
weed, amaranth, goosefoot
from beanlike plants contai
grains of all cereals and m
rich in plant protein. The
stones, mixed with water
ridge, or parched. Grains
served for future use whe
some plants with edible see

a. Baobab. See paragrap

b. Sorrel. See paragraph

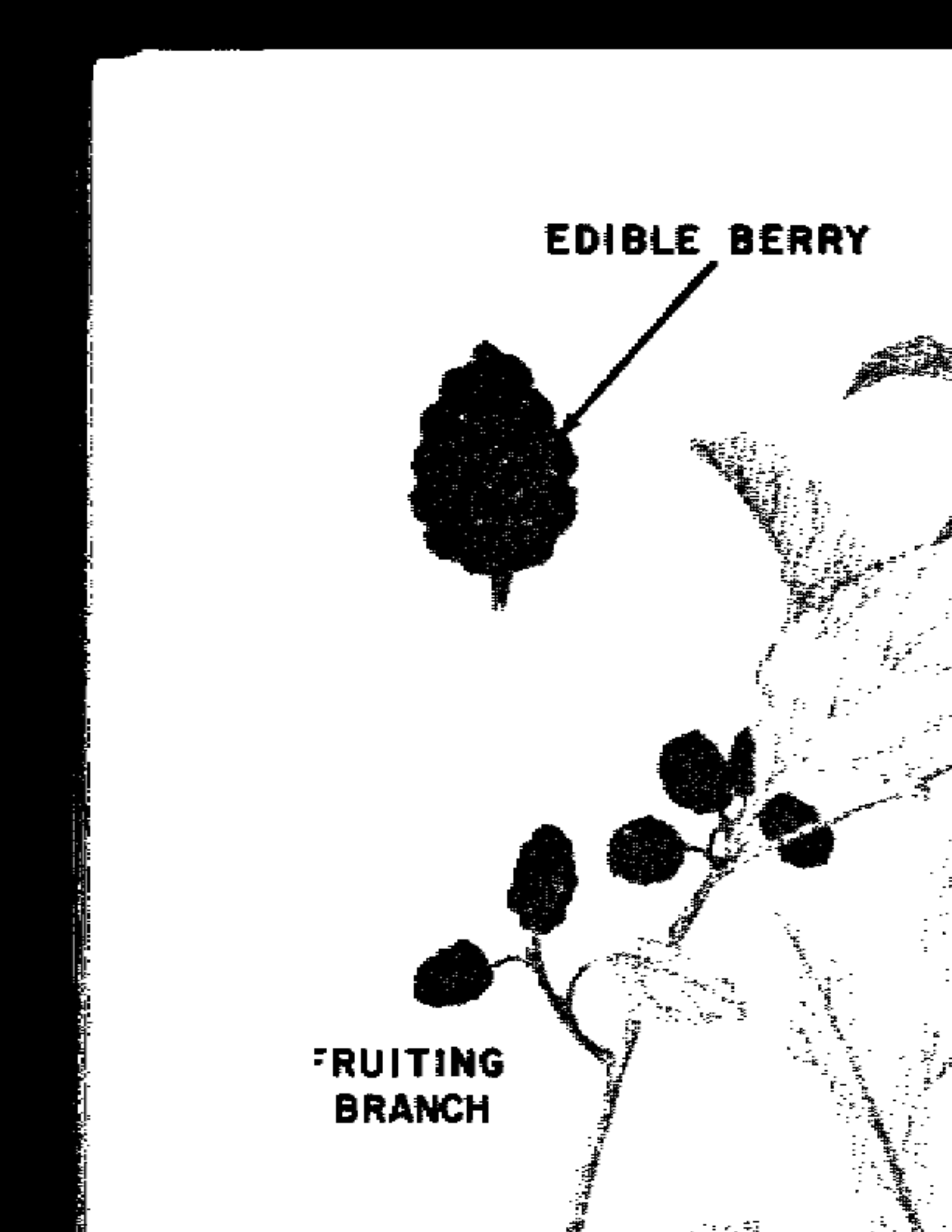
TREES UP

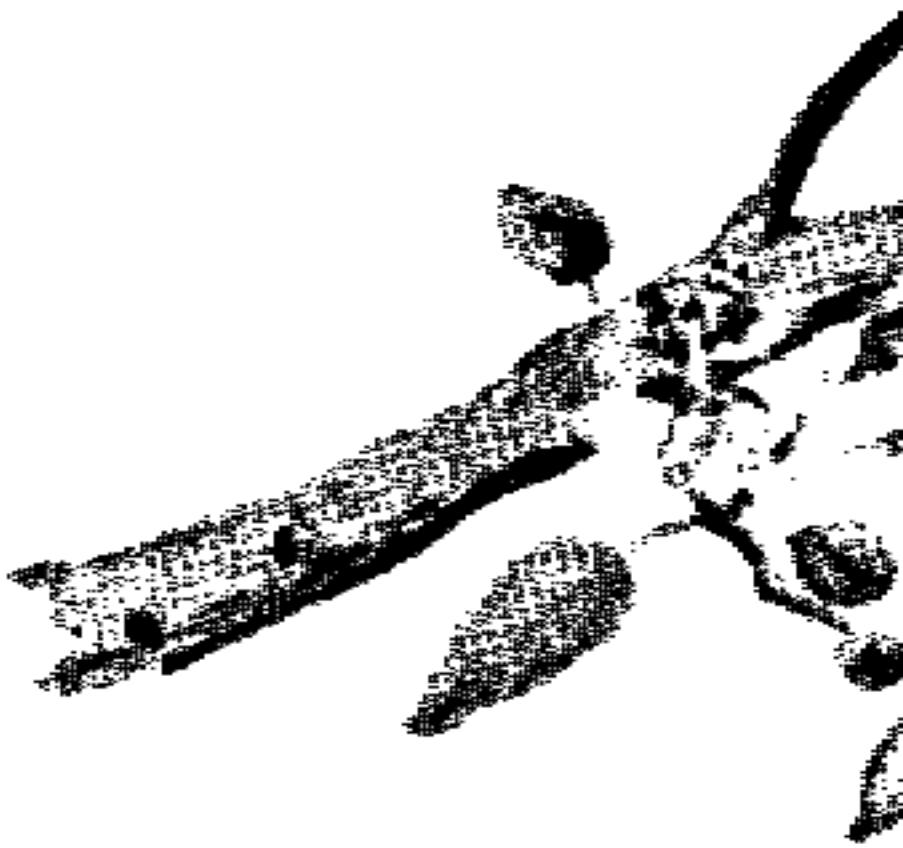
EDIBLE
LEA

EDIBLE
ROOTS

waste places, and secon
leaves about 8 inches lo
up to 3 inches across. T
ter, greenish or yellow,
excellent fresh or cook
(fig. B–45).

(2) *Wild huckleb*
tleberries. Large patche
on the tundra in Europ
summer. Farther sout
hemisphere these berrie
blueberry and whortleb
appear in the tundra of
grow on low bushes.
are borne on taller shru
in height. They are re


EDIBLE BERRY
FRUITING
BRANCH



TREES
10-30 FT. HIGH

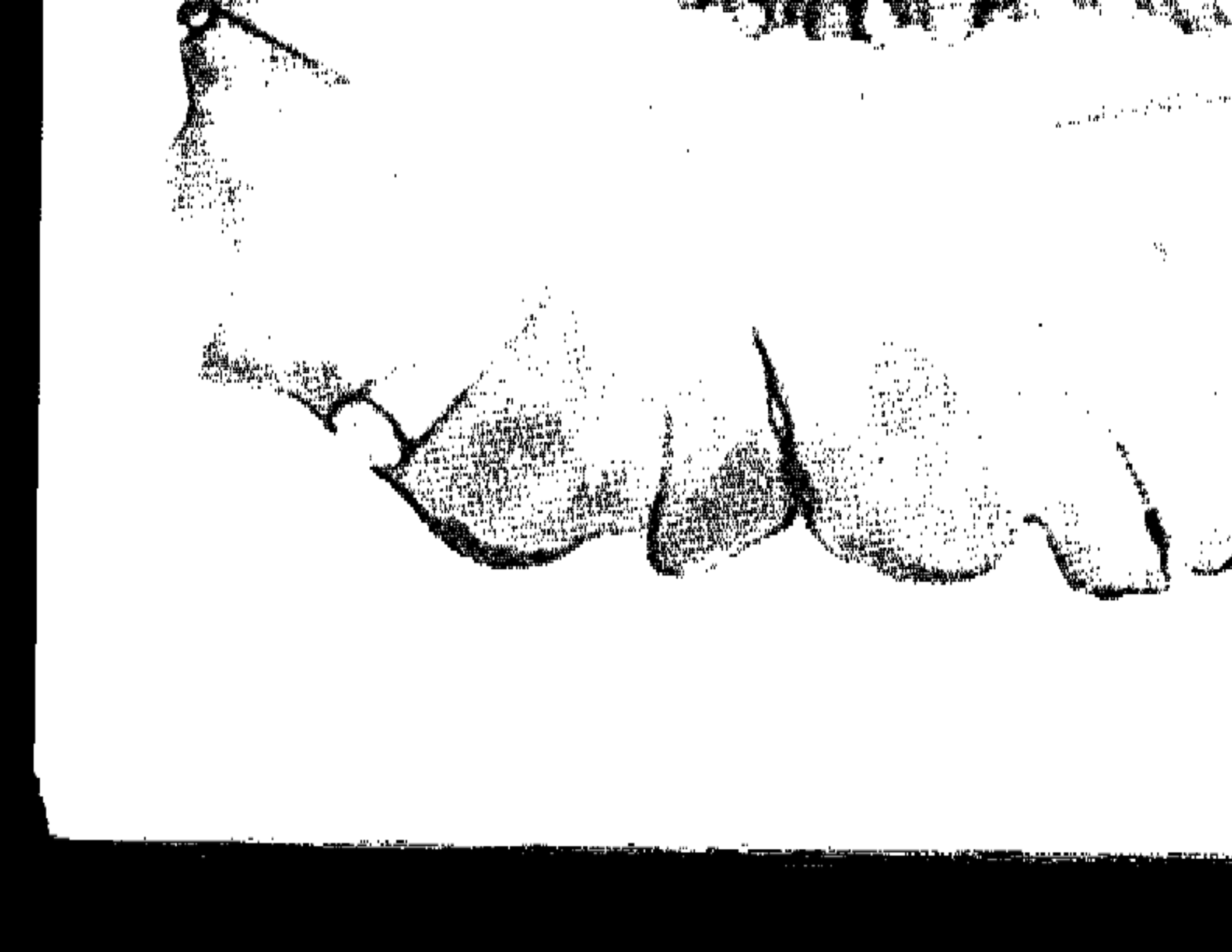
TREES 20-100

roadways and trails, and
long aerial roots growi
branches. After identifyi
fruit which grows out di
The fruit resembles a pea
and woody and covered w
varieties are worthless as
type is soft when ripe, a
or black in color (fig. B–

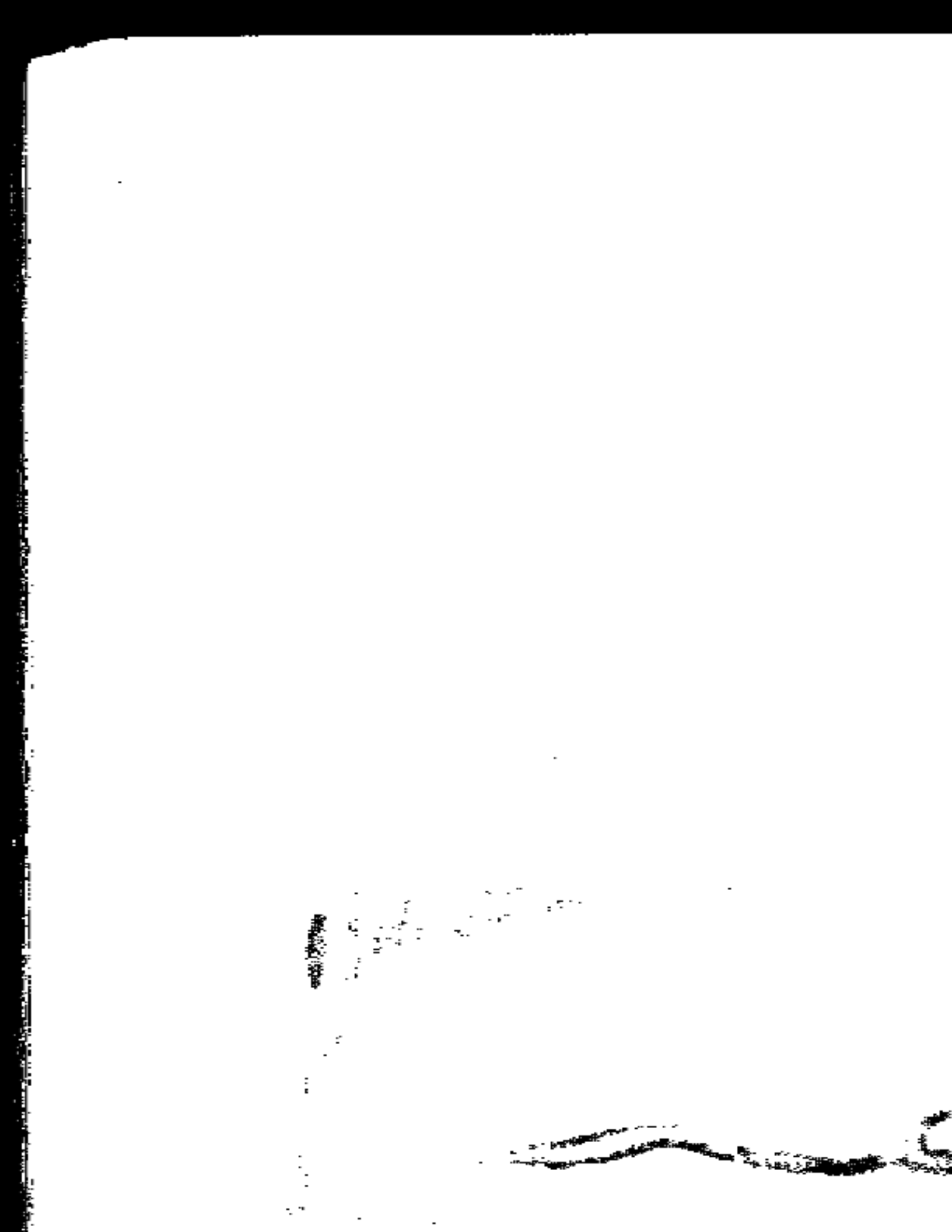
c. Plants With Vegetal

(1) *Wild caper.* Thi
spring shrub or small tree
Africa, Arabia, India, ar
with spine-covered branch
grow near the tips of the

TREE 30-



PAPER-



where dangerous snak
the fatalities are alm
walk barefooted and t
or ankles. If you wea
ing in a camp, the dan
ous snake is small,
malaria, cholera, dyse
quitoes are actually m

d. In camps and ba
tively plentiful, one m
ing or fighting in th
sionally. Many may
clearing ground, cutti
soil.

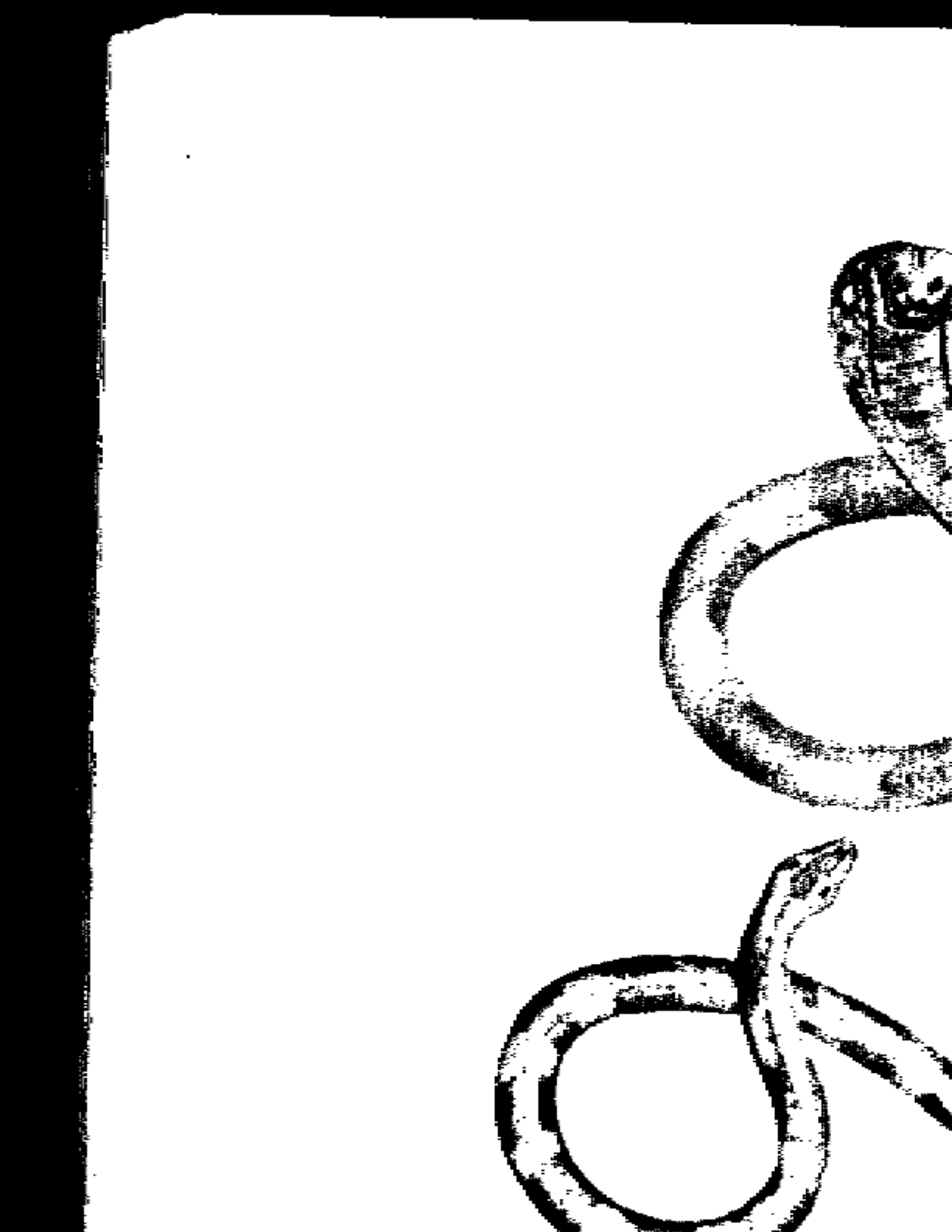
e. There are many re
hazard. First of all, n
pending to a great ex

dangerous kinds in your
the simple precautions
knowing what to do in
bitten.

C–2. Identification of Ki

a. Poisonous snakes
There is *no single* chara
a poisonous snake from
presence of poison fang
of these parts can be det
in dead specimens, and
hard to find.

b. The idea that all p
shaped or triangular h
feature is wrong and



larger than the neck.
long, but may reach 6 fe
(2) *Habits.* The co
around mostly at nigh
rather than in thick
found near inhabited p
The banded krait prefe
are very poisonous. The
normally will not bite u
cobra, kraits do not rais
they strike in a loop
flip the head to one side

c. Coral Snakes.

(1) *Description.* Th
or pink bellies and brig
back. There are 3 or 4

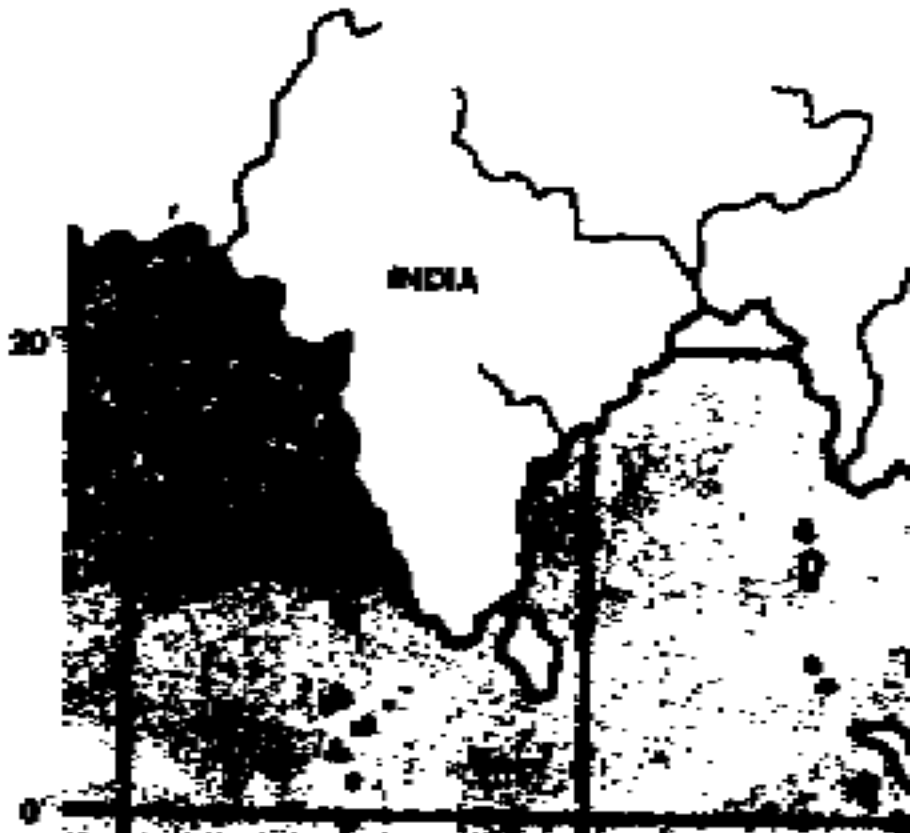
side scales are rough
When disturbed, these s
make a hissing noise.

(2) *Habits.* Russel
spots, but can be found
thick jungle. It is not
not strike unless it is
saw-scaled viper, thoug
readily: vipers only a
to kill. They prefer d
not found in thick jung

f. Pit Vipers.

(1) *Description.* P
thick-bodied. Usually,
much wider than the
monly are brown with

DISTRIBUTION OF POISONOU
SNAKES OF SOUTHEASTERN



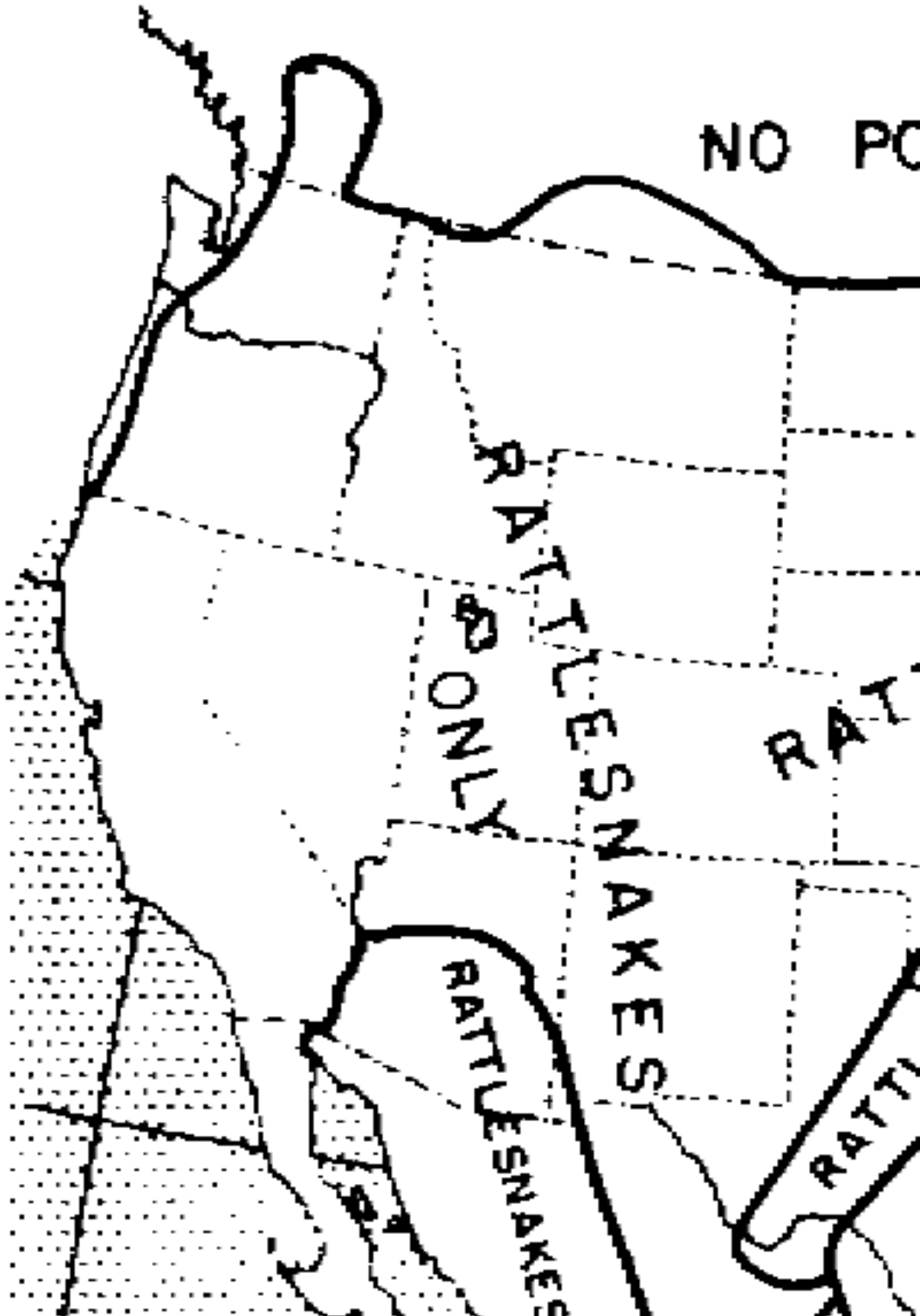
(2) *Habits.* Ratt
practically any type
open, sandy places or
always give a warning
may strike first and
not be induced to ratt
Most rattlesnakes almo
without a fight; howev
bility that it may strik
from a bite depends u
small rattlesnake will
bite of a large one, 3 to

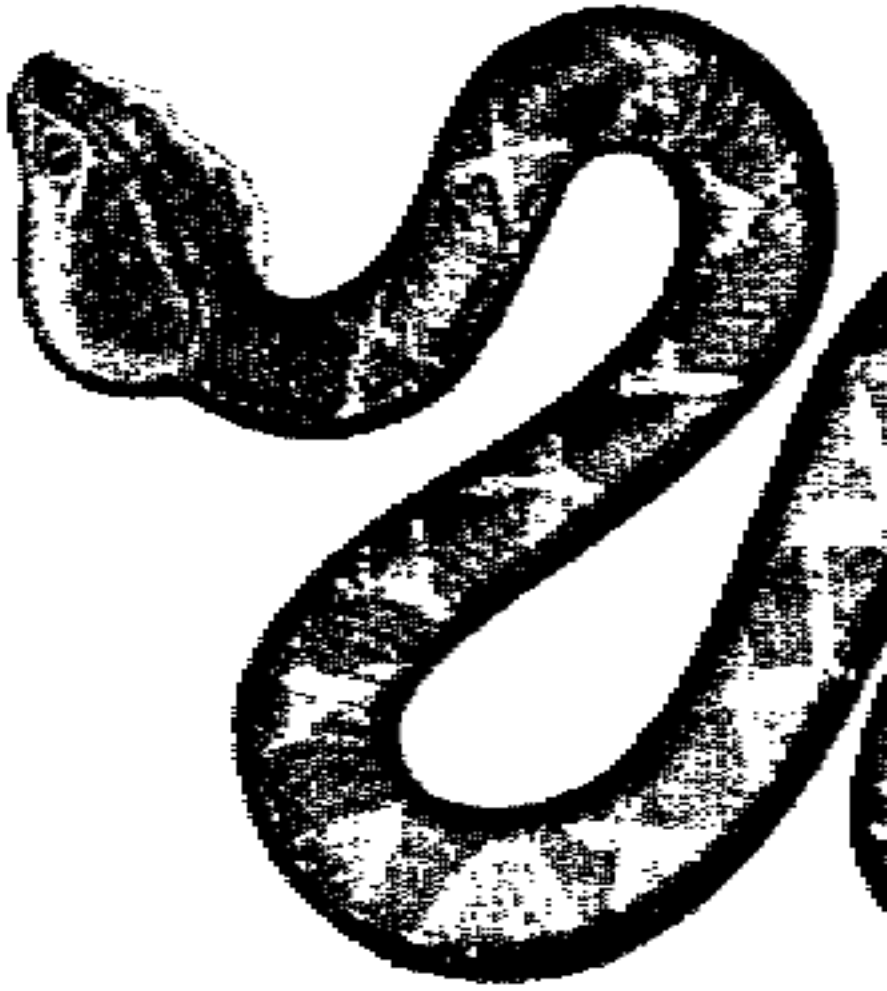
c. Water Moccasins

(1) *Description.* T
thick body and a head
It averages 3 to 4 feet

DISTRIBUTION OF R

NORTH





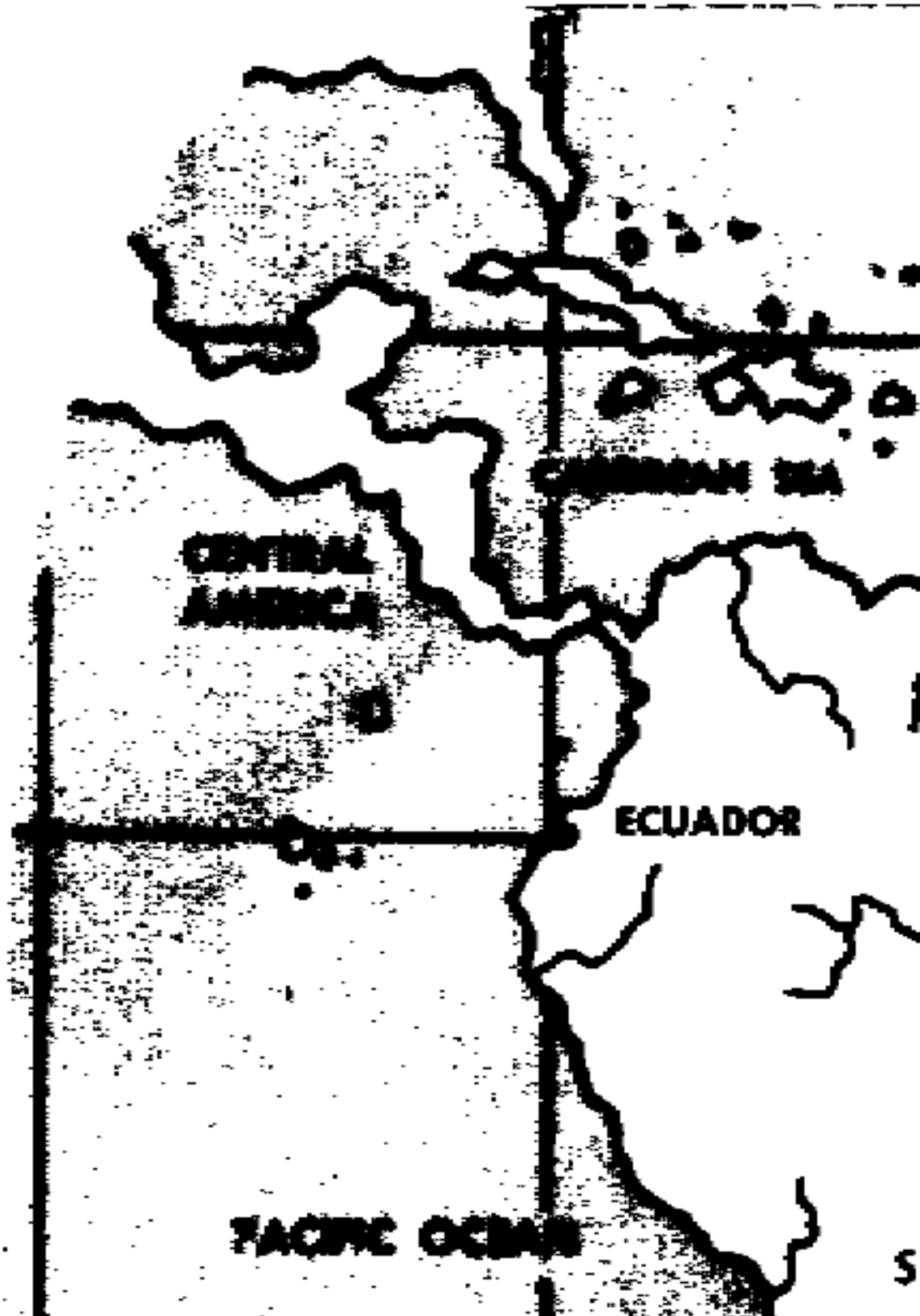
FER-DE-L

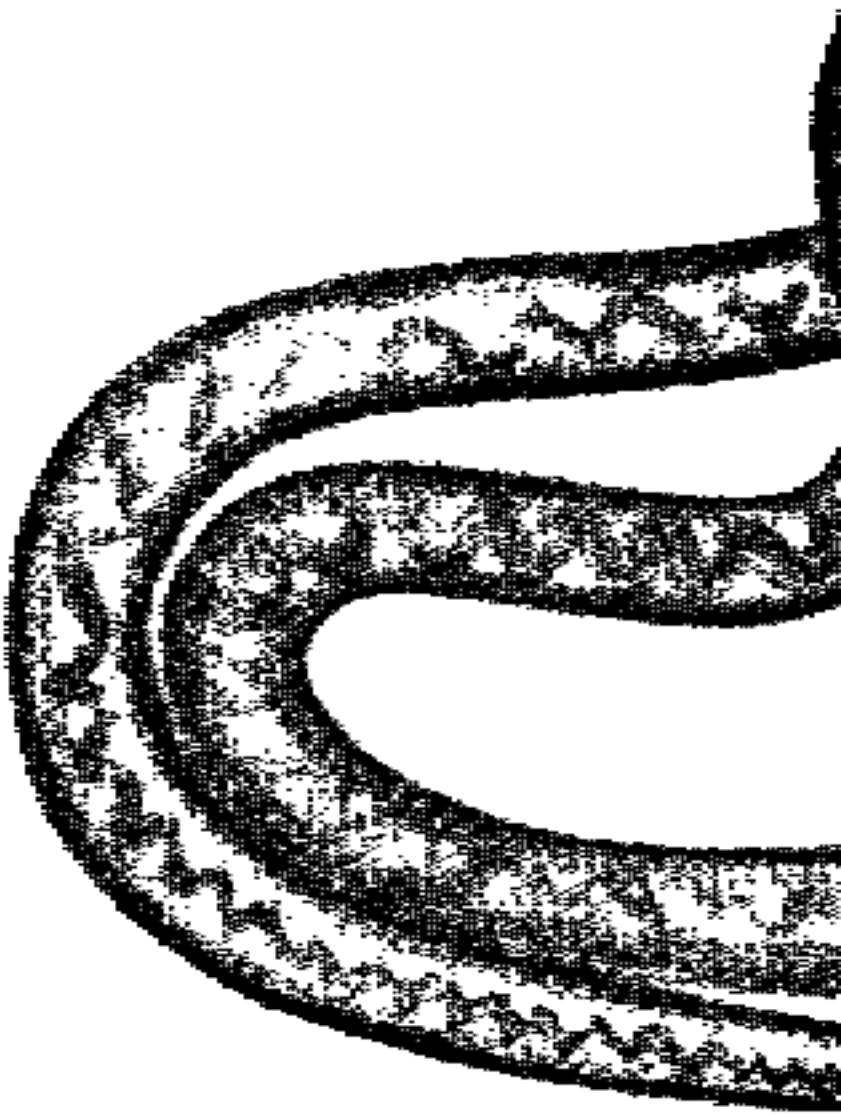
d. Fer-De-Lance Gro

(1) *Description.* T
lated species in this g
about six of its relativ
dish in color, with dar
generally are narrow o
sides. It is moderately
much wider than the
ages about 3 to 4 feet
as 8 or 9 feet. Some
smaller and display a
green or yellow; some
de-lance is also known

(2) *Habits.* This
spread throughout Cen
large species are groun

DISTRIBUTION OF F
OF CENTRAL AND





EUROPEAN

its nose, a very wide h
ered with colored mark
a maximum length of 4
one horn on the nose, a
with oblong markings
colored spots on the s
reach a length of 6 feet.
African vipers, most of
tion of one kind, they
body.

(2) *Habits.* The p
est or grasslands near st
is found in or near stre
in heavy forest. The bi
extremely dangerous; h
aggressive nor are they

breeding season, but at o
and glide away. The bit
dangerous.

g. Distribtution of Poi
Afrira and the Near East.

C–7. Poisonous Snakes of A
the Pacific Island

(fig. C–10)

a. Sea Snakes. See par
figures C–1 and C–6.

b. Copperheads. See
C–4.

c. Death Adders.

(1) *Description.* Thi
clumsy body with a head

DEATH

bands on a tawny back;
ange, or brown; sometin
It has a stout body with
erages about 4 to 5 feet
may reach 6 feet. The t
when angry.

(2) *Habits.* This sn
ranging extensively thro
mania. It is a savage an
causes more deaths in A
snakes combined which
snakes are quick to bite
lunging with a flashing
it sometimes moves the su
the snake seems to be ma

e. Brown Snakes.

DISTRIBUTION OF POISONOU
NEW GUINEA, AND THE PACI