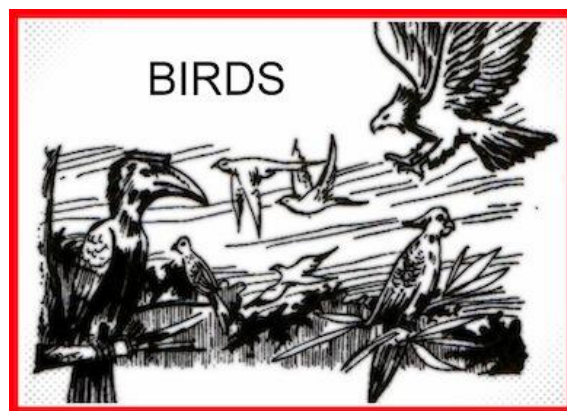




### **Pakong Parang**

An upright fern with short rootstock with height of about one meter; strips are clustered at the base of the plant fronds oblong, pinnate about 20 to 50 centimeters long grows in thickets, old gardens, and crevices of old dry walls.

## ***PHILIPPINE ANIMALS***



### **Birds**

More than 750 species of birds are known in the Philippines which belong to about 293 genera (classification). Some of the endemic species (prevalent in a certain locality) are the zone-tailed pigeon and *punalada* (Mindoro), barred owl (Palawan), *calao* (Marinduque), Tweeddale's black woodpecker and *guaiabero* (Samar-Leyte), monkey-eating eagle, racket-tailed parakeet, blue backed parrot, spine-tailed swift, *tarictic* (hornbill), trogon, cuckoo, and oriole.

## MAMMALS

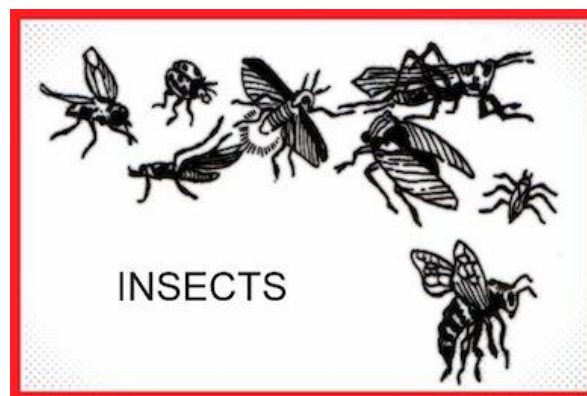
Among the mammals, the horse, cattle, carabao, sheep, goat, domestic cat, and dog have been introduced into the Philippines. The largest indigenous mammal is the *tamaraw* which is found in Mindoro. Big families of mammals include the flying lemur, skunks, otter, palm civets, squirrels, rats and mice, porcupine, scaly anteater, weasel, shrews, tarsiers, monkeys, pigs, and mouse deer.

Some of these animals, however, are found in other countries.



## Insects

The total number of insect species 25,000; of which about 10,000 species, or approximately 40 percent are known. The insects, as the smallest class in the animal kingdom together with the spiders, centipedes, millipedes, lobsters and crabs, form the great sub-kingdom.



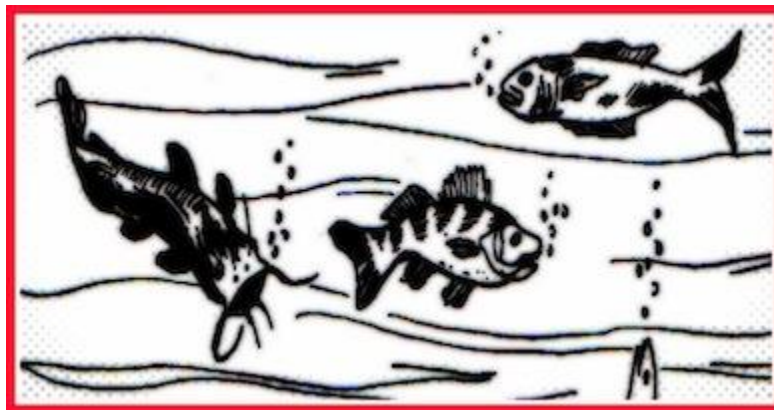
## Anthropoda

Other insects and their allies are the beetles, butterflies and moths, water bugs, cicadas, flies and mosquitoes, bees, wasps, ants, grasshoppers, locusts, crickets, praying mantis, walking sticks, cockroaches, earwigs, dragonflies, termites, and scorpions.



## Fishes

Our country has an exceedingly rich marine fish fauna. Many species are found in lakes and rivers, but most of them are marine or brackish-water species, or else they spawn in salt water and spend only a part of their life in fresh water. Examples of these species are sharks, rays, sawfishes, mullets or *banak*, milkfishes, eels, snappers, *pampanos*, gobies, flying fishes, catfishes, *dalag*, climbing perch, *gourami*, and the carp family.



## AMPHIBIANS, LIZARDS, AND SNAKES

The Philippines is rich in species of amphibia which include frogs, toads, and salamanders that reproduce eggs which are fertilized outside the female's body. The distribution of these forms are definitely confined to land areas. No less than eighty-eight species have been discovered and not more than half the species existing within the Philippines have been known; and most of these species belong in the order Salientia.

The large numbers of house lizards belong to the family *Gekkonidae*. These species are skillful hunters

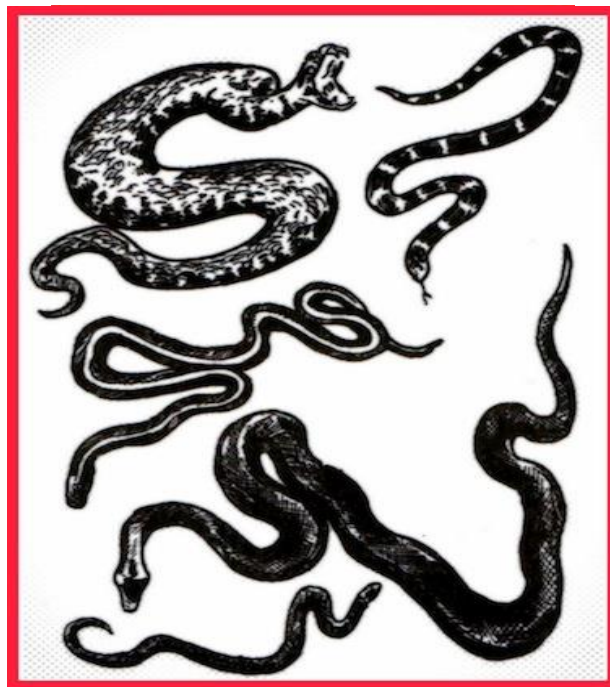
of cockroaches, mosquitoes, moths, and other insect pests. The genera *Hydrosaurus* and *Varanus* are the largest species and the most striking in appearance among Philippine reptiles. These species have great powers of adaptability; they can swim and dive in streams or even narrow stretches or oceans. They feed on rotting animal flesh, bugs, small mammals, chickens, or eggs. There are twenty-eight genera of lizards known in the country.

There are thirty-two genera of land snakes in the Philippines, five of which are endemic. One of the endemic genera has three species, and each of the other four is represented by only a single species. Snakes, like lizards, are, in many cases, arboreal which means that they live in trees. Water snakes are of wide distribution.

The illustrations in the following pages show the distinction among these natural animals. Reading further in some science books may give you a general idea of their characteristics and habitats which will be good information the next time you go to the forest on a hike or camp.

### *Land and Water Snakes*

### *Amphibians*



## Chapter 7: Trail First Aid



Accidents can happen, anytime and anywhere. There may be time during your Scouting activities that you encounter accidents. Or you may be administering first aid to someone who meets an accident. As a Scout, always be prepared with proper training and commitment.

Preparedness suggests three important things: good health, mental alertness, and extra care in the process of undertaking any Scouting activities. This is the best way to prevent accidents.

Preparedness, however, is also needed in giving first aid to an injured person. The way you act in cases of emergency has a great bearing on the patient's recovery and condition. The confidence that you show, the common sense that you display, the calmness and cheerfulness in handling the situation make your patient feel at ease.

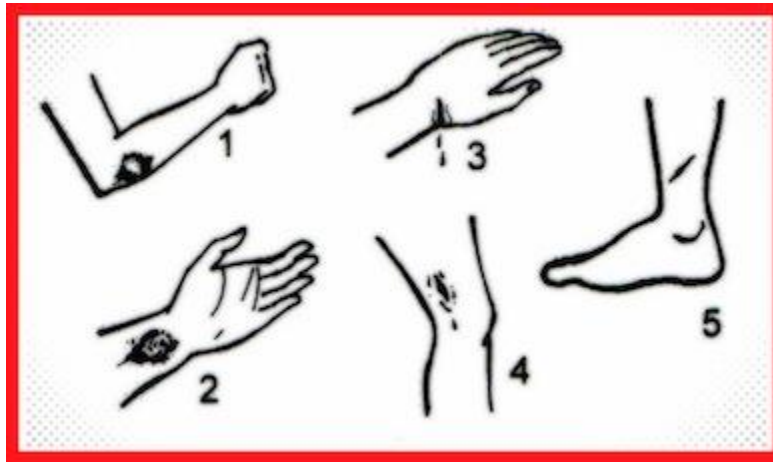
### **WOUNDS**

Wounds are divided into two types: the closed or contused wound and the open wound. It is a closed wound when the soft tissue is damaged below the surface without a break in the skin; and it is an open wound when the skin is cut or torn exposing the tissue beneath. In a closed wound, the blood leaks out causing skin discoloration or a bruise (black or blue mark). An open wound is more dangerous because it is subject to bleeding and possible infection from contamination.

Open wounds are of five major types:

1. **Abrasions** – loss of skin surface without penetration. Made by rubbing or scrapping of the skin surface.
2. **Lacerations** – smooth or jagged cuts through the surface of the skin and blood vessels. Caused by blunt instruments.
3. **Avulsions** – skin is torn or hanging loose.
4. **Punctures** – penetration of the skin with a sharp object.
5. **Incised** – caused by sharp cutting instrument.





Severe closed wounds on the soft tissues may be helped by applying padding and pressure from a soft roller bandage. Basically, open wounds are treated or controlled by three general steps:

1. *Control bleeding.*
2. *Protect the wound from contamination and infection.*
3. *Immobilize the part; keep the patient quiet and treat him for shock, if necessary.*

Do not remove a buried object in a puncture wound to avoid severe hemorrhaging or nerve damage. Leave this to a physician. In case of deep wounds, never wash out the wound because more bleeding and contamination may occur.



## **EXTERNAL AND INTERNAL BLEEDING**

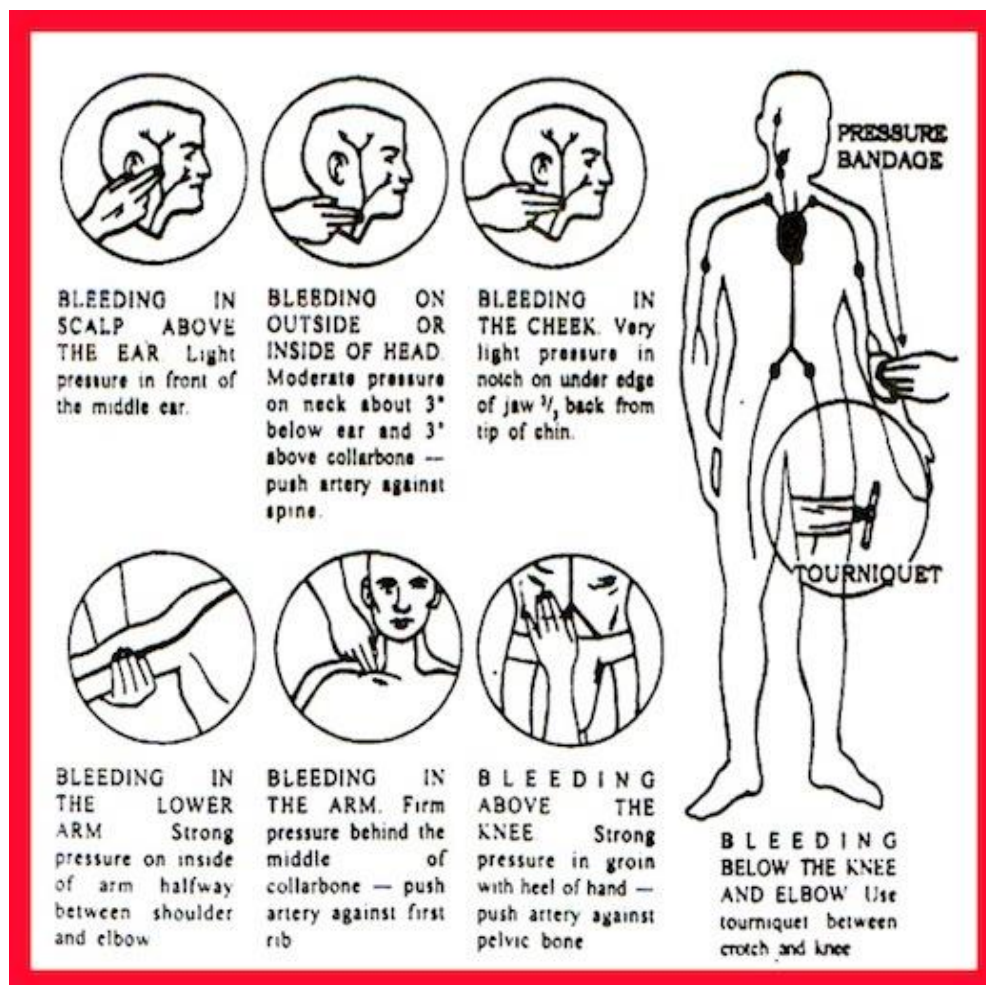
The bleeding which can be seen coming from a wound is called external bleeding. This may be controlled by applying pressure to the bleeding site. This method will stop the blood flow and will allow normal coagulation (blood clotting). There are three ways to control bleeding:

1. *Apply direct pressure over the wound.*
2. *Apply pressure at specific pressure points.*
3. *Apply tourniquet for severe cases.*

The pressure points for the extremities (legs and arms) are the femoral and the brachial arteries. Bleeding from the wounds of the neck, mouth, and throat may be controlled by applying pressure to the carotid artery which is located in the neck.

## 6 DIGITAL PRESSURE POINTS

*How to stop bleeding*



Internal bleeding may be very serious and can cause death from shock or loss of blood. Slight bleeding from the ears, mouth, rectum, or other body openings usually is an indication of internal bleeding. The following may be indications of internal bleeding:

1. *Weak or rapid pulse*
2. *Cold or clammy skin (moist and sticky)*
3. *Low or erratic blood pressure*
4. *Nausea*
5. *Thirst and/ or signs of anxiety*
6. *Shortness of breath*



*Care of Shock*

## **SHOCK**

Shock is a life-threatening condition that develops when the body's blood pressure drops dangerously low. It can result from great pain, a large burn, losing a lot of blood, severe illnesses, dehydration, or severe allergic reaction. Parts of the body such as the nervous system, the brain, and the kidneys cannot tolerate the lack of blood flow because they need the oxygen which it supplies. There are many types of shock of different causes:

**Hemorrhagic shock** is usually due to loss of blood, either internal or external.

**Respiratory shock** results when the victim cannot breathe the needed amount of oxygen and the body accumulates carbon dioxide.

**Neurogenic shock** is caused by paralysis of the nerves, usually from spinal chord injuries or neck injuries.

**Psychogenic shock** (fainting) is usually caused by a sudden reaction of the nervous system which causes temporary loss of blood to the brain. Lowering the head will cause the return of blood and usually revives the patient.

**Cardiogenic shock** is caused by inadequate functioning of the heart identified with chest pains.

**Septic shock** is caused by severe infection which results in bacteria entering the bloodstream.

**Anaphylactic shock** is a severe form of an allergic reaction. This kind of reaction may be caused by ingestion, injection, insect stings, and inhalations.

**Traumatic shock** (injury-related shock) results from lack of oxygen caused by obstruction of air passages.

The common signs of shock include anxiety and restlessness, weak or rapid pulse, cold or clammy skin, profuse sweating, pale or blue facial coloring, irregular or gasping breathing, dilated pupils, thirst



or nausea, slowly but steadily falling blood pressure, feeling of faintness, and unconsciousness.



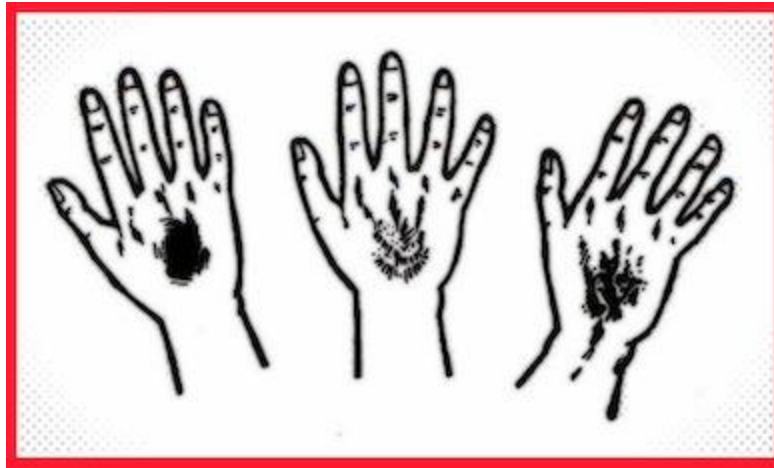
Any of the following emergency treatments should be applied to all patients who are in shock:

- 1. Open airway; restore breathing and heartbeat if necessary.*
- 2. Control any bleeding.*
- 3. Elevate lower extremities.*
- 4. Splint fractures.*
- 5. Prevent loss of body heat.*
- 6. Keep victim lying down (except those with lung or heart conditions).*
- 7. Record blood pressure and other vital signs until arrival at the hospital.*
- 8. Handle the victim gently.*

## **BURNS**

Burns are of four different types: heat, chemical, radiation, and electrical. However, they are classified according to the severity of the burn itself.

1. First-degree burns (the mildest) – the outer skin is red and painful.
2. *Second-degree burns* (mildly severe) – Blistering of the skin occurs, very painful.
3. *Third-degree burns* (severe) – There is damage to the entire skin thickness with possible damage to the tendons, muscle or bone. Also burns on the face, palms, and soles at the feet.



The seriousness of the burn depends upon the degree of the burn, the extent of the body burn, the age of the patient involved, and the location of the burn in the body. The shock factor should always be considered because it is the most common early cause of deaths in patients with untreated large wounds.

Emergency measures for first- and second- degree burns are:

- 1. Immerse the burned part of the body in cold water for up to 5 minutes.*
- 2. Cover the burn with sterile dressing or clean cloth.*
- 3. Apply cold, wet applications for the relief of pain or apply a burn ointment on the affected part.*
- 4. Transport the patient to the hospital emergency department.*

For severe, third-degree burns, the basic emergency care include the following:

- 1. Relieve pain. Use cold applications.*
- 2. Prevent shock.*
- 3. Prevent contamination.*
- 4. Take care of other possible complications (respiratory problems from heat or smoke inhalation).*
- 5. Transport the patient immediately to the hospital emergency department.*



*Blisters caused by burns.* Do not break blisters. However, if the blisters are broken, wash gently with soap and boiled water that has been cooled. Sterilize a little amount of vaseline by heating it until it boils and spread it on a piece of sterile gauze. Then, put the gauze on the burn. In the absence of vaseline, leave the burn uncovered. If signs of infection appear like pus, bad smell, fever, or swollen lymph nodes, apply compress of warm salt water solution (1 teaspoon salt to 1 liter of water) three times a day. Boil both the water and cloth before use. With great care, remove the dead skin and flesh, then apply a little antibiotic ointment.



*Blister on heel* – Wash the foot with soap and water. Allow it to dry, then cover with a sterile adhesive bandage or a sterile pad. If you think that the blister may break, drain the fluid. Sterilize a pin in the

flame of a match. Puncture the blister near its edge and press out the liquid. Put on a sterile bandage.

## ***POISON BITES AND STINGS***

### **Snake Bites**

The majority of snakebites, although feared, are not fatal. The usual signs of a snakebite include fang wounds, burning pain, and swelling at the point of the bite. The victim may have a tingling sensation of the tongue and mouth and also around the wound. Perspiration, possible respiratory distress, and signs of shock may accompany a snakebite.

When someone has been bitten by a snake, try to find out if the snake is poisonous or harmless. Their bite marks are different. The bite of a poisonous snake leaves marks of the two fangs (and at rare times, other little marks made by the lower set of teeth). The bite of a snake that is not poisonous leaves only two rows of teeth marks, but no fang marks.

When treating a victim for poisonous snakebite, follow these emergency measures:

1. **Keep the victim quite.** Do not move the part that has been bitten. The more it is moved, the more rapidly the venom will spread through the body. A person who has been bitten on the foot should not walk, not even one step. Carry him on a stretcher.
2. **Tie a cloth around the limb, just above the bite.** Do not tie it very tightly, and loosen it up for every half hour.
3. **If you can get the right kind of snakebite anti-venom, inject it carefully** following the instructions that come with the medicine. Take all precautions to prevent allergic shock. Anti-venom should be injected not later than three hours after the bite. Have the snake bite antitoxin ready and study how to use it ahead of time before someone is bitten.
4. **Do not apply ice** around the limb that was bitten or to any snake bite.
5. **If signs of infection develop, use penicillin.**

## ***INSECT BITES AND STINGS***

The pain from insect bites such as mosquitoes, ants and bees sting can be relieved with a cold towel or ice water. If the stinger of a bee or wasp breaks off, flick it off with a finger then apply a paste of household meat tenderizer and water.

### **Jellyfish Stings**

The bell-shaped pink jellyfish has thousands of stinging cells on its tentacles. When touched, the poisons of these cells cause a sharp burning pain. To relieve the burning pain, wash the touched area with diluted ammonia or rubbing alcohol; and then apply meat tenderizer paste. Do not use this technique, however, when it is your eyes that were stinged. Just wash your eyes in clean water and then apply eye drops.

### **Scorpion Stings**

Some scorpions are far more poisonous than others. Take paracetamol tablets and, if possible, put ice on the sting. For the numbness and pain that sometimes last for weeks or months, apply hot

compresses.



### **Dog Bites**

A dog bite can be a serious or life threatening matter, because the dog may be suffering from a disease called rabies, which if left untreated can lead to serious consequences even death to the person afflicted. The only way to find out if the dog is rabid is to have it leashed and placed under observation. If bitten by a dog, immediately wash the affected area with plenty of soap and water to remove the saliva. Cover the bite area with a sterile dressing then see a physician.

### **Rat Bites**

People are bitten by rats nibbling at their clothes while asleep.

Rats bring with them deadly diseases such as, hepatitis, leptospirosis caused by *hanta* virus found on the rat's urine.

Wash the bite thoroughly with soap and water. Then, cover the bite with sterile dressing. Afterwards, seek the medical treatment of a physician.

## **FRACTURES**

Any break in a bone is called a fracture. Fractures are divided into closed or **simple** fractures and open or **compound** fractures. A closed fracture is one in which the skin is not broken. When the bone breaks through the skin, it is called an open fracture. Fractures are classified depending upon the appearances of the broken bone, as follows:

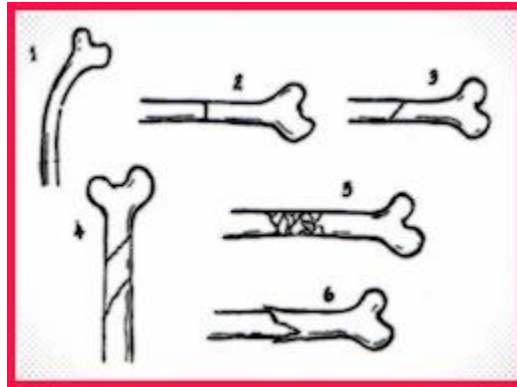
1. **Greenstick fracture** – incomplete fracture usually found in children.
2. **Transverse fracture** – fracture line is at right angles with the long part of the bone.
3. **Oblique fraction** – fraction line is set at an acute angle with the long part of the bone.
4. **Spiral fracture** – fracture line twists around and through the bone.
5. **Comminuted fracture** – fracture in which the bone is broken into two or more pieces.



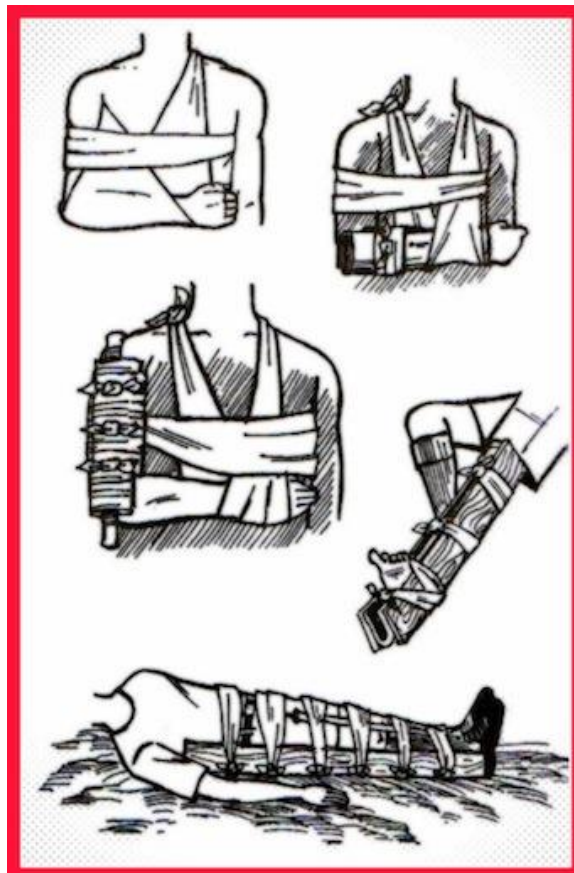
6. **Impacted fracture** – fracture in which broken bone ends are jammed together.

Signs of fractures are pain and tenderness, loss of the use of suspected broken extremity, grating, deformity, and swelling or discoloration which may not be seen for several hours. Immediate care of fractures is important because of the danger of injuring the surrounding tissues such as muscles, nerves, and blood vessels.

When applying first aid to an unconscious patient, look carefully for signs of fractures and always suspect that there may be an injury to the neck and back.



PROPER CARE OF FRACTURES



***Collarbone and Shoulder Fracture.*** No splints are necessary. Place the forearm in a sling with the hand raised about 7 centimeters higher than the elbow. Tie the upper arm against the side of the body with the wide cravat bandage. Make sure that the bandage is not so tight that it stops the circulation of the arm.

***Lower Arm or Wrist Fracture.*** Use a splint made of folded magazine or thick newspapers. Or use two padded wooden splints as long as the distance from the elbow to the knuckles. Place one on the inside of the arm, the other outside and bind them together. Place the arm in a wide sling with the thumb up and the hand slightly higher than the elbow.

***Upper Arm Fracture.*** Use one padded splint only, slightly longer than the distance from the shoulder to the elbow. Bind it with the two binders outside of the arm. Place forearm in narrow sling. Tie the splinter arm against the side of the body with a cravat bandage.

***Lower leg Fracture.*** Use two padded splints as long as the distance from the middle of the thigh to just beyond the heel. Place one splint on each side of the injured limb and bind them together using at least four binders.

***Thigh Fracture.*** Use padded splints, one for the outside of the leg extending from the heel to the armpit, one for inside the leg from heel to crotch. Bind the splints together. Use four binders around the splints and legs, and three binders around the upper part of the outside splint and the body.

## **TRANSPORTING AN INJURED PERSON**

The transportation of the patient requires calmness, care, and common sense. A seriously injured person should be moved by a first-aider only in case of extreme emergency.

Before transporting a person who is conscious, the first-aider should ask him where the pain is and then examine the area mentioned, and make a thorough check beginning from the head to toe. When the patient is unconscious, the first-aider should suspect a head injury and/or a spinal injury, and should always conduct a complete examination for any possible injury.

Usually, patients are transported lying flat on their back; however, this will vary with certain injuries. If a Cervical Spine Injury is suspected, the patient should be transported face up, with the neck and head immobilized. A rolled towel should be placed underneath the neck; any movement of the head or neck should be avoided. If a Thoracic Spine Injury is suspected, the patient should be transported in the same position in which he or she is found. If on the back, a support should be placed under the spine.

In all cases of suspected spinal or neck injuries, the patient should be moved carefully and with as little movement as possible.

Unconscious patients should be transported on their side to allow any blood or secretions to run out of the mouth and nose so it will not clog the airways.

### **Walking Assist**

A patient who is weak and who has suffered a minor accident may be assisted to walk. Bring one of his arms over your shoulder. Hold on to his wrist. Place your free arm around his waist.



### **One-Man Carry**

This is best done by piggyback. Bring your arms under the patient's knees. Then, grasp his hands over your chest.



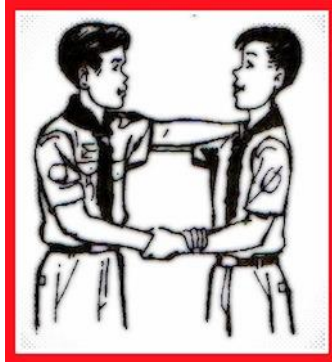
### **Four-Hand Seat**

This is a good method of transporting for two first-aiders to carry a conscious patient. Each bearer grasps his own right wrist with his left hand. The two bearers then lock hands with each other. The patient places his arms over the bearer's shoulders.



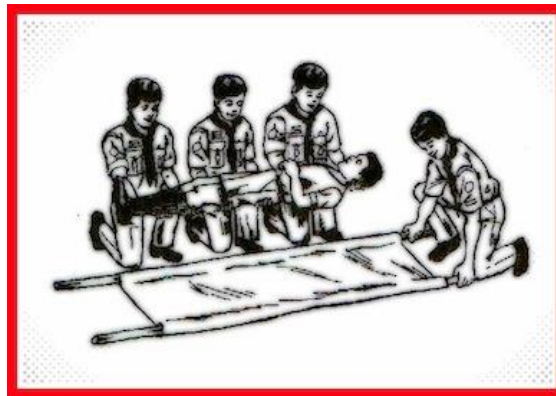
## Two-Man Carry

Use this method when the patient is unconscious. Bearers kneel on each side of the patient. Each bearer brings one arm under the patient's back, the other under his thighs. The bearers grasp each other's wrists and shoulders and rise from the ground with the patient.



## Use of the Stretchers

The most common type of stretcher is the standard folding stretcher called the army type. This is essentially made of canvas and supported on each side by wooden or aluminum poles. Improvisations of this type may be made from a combination of poles, coats, blankets, sacks, ladders, shutters, Scout shirts, and chairs tied together.



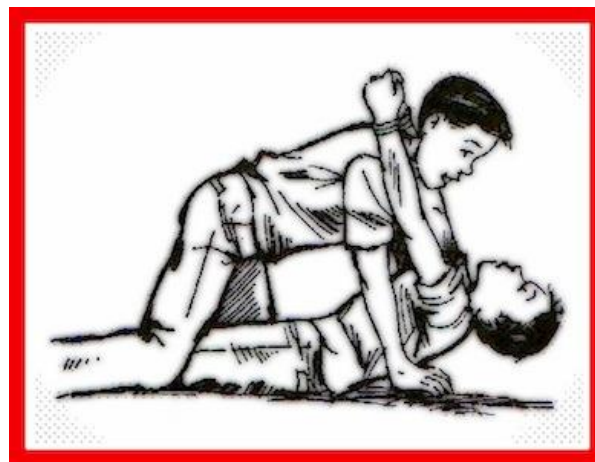
### **Pack-Strap Carry**

This method is useful when the patient is in bed or on a chair. With your back toward the patient, stoop in front of the patient bringing the patient's arms over shoulders and pulling the patient closer to your back. You should then pull the patient's hands together and as low as possible in front of your chest. Raise up and walk with your back bent forward.



### **Fireman's Drag**

This is the best method for unconscious patients when it is impossible to stand. Place the patient on his or her back and tie the wrist together. You should then straddle the patient on knees and hands, placing the patient's arms around your neck. The patient may be moved by your raising his or her shoulders and crawling forward, dragging the victim beneath you.





## Chapter 8: Camping and Expedition



Every Senior Scout going up through the advancement ranks looks forward to the time when he can initially get into an overnight camping and eventually to a 3- to 5-day expedition. The preparations required for a stay in the out-of-doors are numerous and entails serious study. A lot of indoor or backyard practice should be done before one even attempts to go on an expedition.

There is a difference between camping and expedition, although the two are inter-related. Camping is an activity which entails going to one spot, pitching tent there, and staying for a definite period of time before returning. An expedition involves more than one campsite' and may include more than one means of traveling – sometimes by foot, sometimes by boat, sometimes by motor vehicle. An expedition requires the skills learned in hiking, cooking, camping, nature study, communications, backwoods engineering, and a host of allied scout skills.

Camping or expeditions does not start at the edge of wilderness. It starts back in civilization – right in your Outfit or Crew Headquarters. It starts with careful planning, with detailed study of the area you are going to explore, pack checklist preparation, advice from experts, reading, actual backyard practice, body toughening, and the proper selection or making of outdoor equipment.

About a hundred years ago, the trailblazer left civilization with no visible pack on his back. He carried only a rifle, bullets, a knife, and a small sack of odds-and-ends. However, he did carry a pack – the vast store of knowledge, resourcefulness, and courage packed in his mind. Experience and time will also give you such a “pack” and as you gather them, your visible pack will grow smaller.

### ***YOUR PACK***

When you hike to a campsite, remember that the weight of your pack seems to double by the end of the first few kilometers, so keep it light. Don't take unnecessary things such as glass or metal containers; use cloth or plastic sacks. A 1-kilo axe carries and swings twice as easy as a 2 -kilo axe. Perhaps a light bolo will work better.

Plan to eat well on an expedition or a camping; don't try to save on food by eating half of what you

should normally eat just to extend the time of the expedition. It is better to cut down the number of days instead of the rations.

No two outdoorsmen will agree as to the best pack because there is none which is best for all purposes. The key question to ask is : does it do the job and does it suit your body build and taste?

There are many kind of pack available in the market today, but their price can be prohibitive to the average Scout, but that should not discourage us, we can improvise after all that's what Scouting is all about isn't it.?

The following are possible packs you can choose from depending on your purpose and camping duration.

1. *Duffle Bags* – placed on a pack frame or pack harness. It is difficult for a duffle bag to be lugged around by hand.
2. *Pack Frames* – a perfect back pack, because it is cool and keeps the load in position – If you have a hood carrying padded hip belt, so much the better. 70% of your pack weight is better carried on the hips which is far more robust than your shoulders. Pack a frame this way: Put together all loose gear as compactly as possible on the fly of your sleeping bag or the end of a blanket folded to the size of a single bed. Then fold the top and sides to make as small and tight a bundle as possible, rolling the bundle over and over.
3. *Horse-Collar Pack* – can be made with a poncho or blanket. Spread the poncho on the ground and evenly distribute your gear along the length leaving some 15 cm. at the ends free for folding over. Roll the poncho tightly into a thin roll, lash with cords or rope at both ends and at intervals using a rolling hitch. Bend the roll over and sling over your shoulders or lash onto your haversack.
4. *Standard Pack* – There are standard Scout packs which are available for use from the National Scout Shop, Boy Scouts of the Philippines. These packs have been designed for multi-purpose use by all sections of the BSP – Boy Scouts, Senior Scouts, and Rover Scouts.

## **WHAT TO PACK**

The things you bring to a camping trip or expedition will depend on the season of the year, your companions, the duration of the trip, and the places you will go to.

Normally, all camping gear can be divided into two kinds: the individual gear and the crew/outfit gear.

The following is a general list. You do not need to bring all of them; just select the ones you need for the season and the camping location, remember avoid bringing glass or easily breakable items or containers:

### **Optional Items**

- Map
- Songbook
- Survival Kit
- Scout Handbook
- Bible or Prayer Book
- Camera

Sunglasses  
Binoculars  
Nature books  
Swimming Trunks  
Personal Tent  
Rubberboots

**To be placed inside or tied to your pack:**

- Waterproof ground cloth or plastic
- Toilet Kit containing: comb, toothbrush & toothpaste, soap, hand.bath towels, metal mirror, hair groomer, deodorant, shampoo, toilet paper
- Sneakers
- Clothesbag containing: extra shirts/pants, pajamas or sweat shirt, extra handkerchief, extra socks, change of underwear
- Sleeping bag or 2 to 3 warm blankets
- Axe or bolo
- Climbing rope, of at least 20 meters
- Emergency first aid

**To be carried in the pocket**

- Jack knife / Scout knife
- matches in waterproof case
- wallet with money (include small change for phone calls)
- compass
- 2-3 adhesive strips
- handkerchief
- ballpoint pen

**To be placed on top of your pack**

- Repair Kit containing: Rubber bands, Shoelaces, Safety pins, cord or rope, fire starter, extra plastic bags, duct tape, sewing kit
- Eating Utensils, such as: knife, spoon, fork, cup, plate, saucer plate
- Flashlight
- First Aid Kit

**To be worn (or you can place on top of pack)**

- Complete uniform

- Hiking shoes
- Sweater/jacket
- Raincoat or poncho
- Watch
- Canteen or bottled water
- Hat
- Rubber Slippers

Unless you are camping alone or with a companion, the following Crew/ Outfit gear should be brought along as the situation demands:

#### **A. Tentage**

- 2 man, 4 man etc.
- Poles/pegs/guylines

#### **B. Cooking Equipment** (based on size of the group)

- Pots (4)
- Frying Pans (2 or 3)
- Serving Plates (2 or 3)
- Serving/ measuring cups (1 or 2)
- Spoon, large
- Fork, large
- Spatula or pancake turner
- Can Opener
- Carving/ paring knives
- Matches in waterproof container
- Sugar container, unbreakable
- Salt and pepper container, unbreakable
- Cooking gloves
- Plastic Food containers (3 or 4) w/ screw lids
- Roll of Aluminum foil

#### **C. Optional Items**

- Unbreakable plastic mixing Jars

- Extra canteens or bottled water
- Plastic bags, various sizes
- Emergency lanterns, battery operated
- Table cloth or plastic

#### **D. Camp Tools**

- Axe or bolo
- Camp Shovel
- Bow saw
- Sharpening stone
- Cord or wire
- Sewing kit
- Side cutting pliers
- Rubber boards
- Safety pins

#### **E. Sanitation Equipment/Supplies**

- Crew or Outfit size First Aid Kit
- Screw-top water Jug (20 liters)
- Scouring pads
- Bio-degradable soap in plastic container
- Paper towels
- Buckets and plastic pails
- Tote-litter bags
- Garbage bags for all kinds of non-biodegradable trash

*(N.B.: Do not dig holes and bury non bio-degradable trash, the next camper after your group will not appreciate your mess and you will contribute to the spoilage of our environment and condemning the next generation of Scouts to have to clean up after you.)*

#### **F. Headquarters Equipment**

- Philippine flag with halyard
- Crew/Outfit flags
- Dining ply
- Food chest



Your Crew or Outfit can add to this list according to your plans.

### **Distributing the Load**

Each Senior Scout should be able to carry his own personal gear on his back. In addition, Crew or Outfit gear, should be equally distributed among Scouts according to their ability to carry such loads; that is, stronger Scouts should carry more or heavier Outfit gear than the physically weaker ones.

This is the Scouting way.



Each Scout is responsible for returning the assigned equipment he is carrying to the Quartermaster at the end of the camping or expedition.

Each Scout is also responsible for bringing a plastic bag for trash he can find and pick-up along the natural trail so that all non-biodegradable garbage can be disposed of properly in a municipal landfill.

## ***MODES OF TRAVEL TO CAMP***

### **On Foot**

The most common mode of traveling to a nearby campsite is, of course, by foot. The Senior Scouts carry their own packs and hike to the site. Normally the hiking formation along trails and defined roads is for the Crew Hikemaster to lead the way. The Crew Leader stays some 10-15 paces behind him followed by all the rest. The Assistant Crew Leader stays at the back of the line about 10-15 paces behind the last Scout in order to serve as the “back-up” man in case some Scouts may lag behind during the hike.

If the campsite can be traversed by land transportation, the Crew/Outfit equipment is usually hauled in a van or truck to the campsite ahead. However, in rugged terrain, the Crew/Outfit equipment may have to be distributed among the hikers.

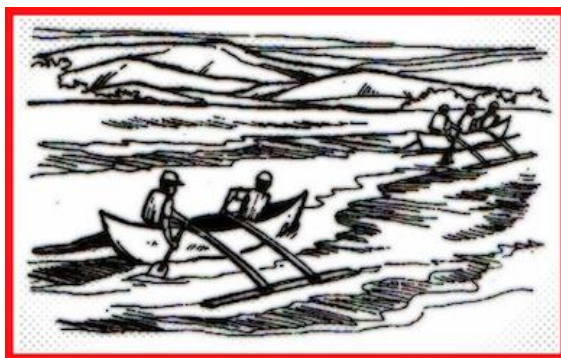


## By *Banca*

Traveling by *banca* is also a thrilling experience. It is a lot easier on the feet than hiking. Since the Philippines is an archipelago – islands surrounded by water – travel by *banca* would be common in many places.

It is mandatory that all boys shall have a floatation device (life jacket, 2 old coconut strapped together, etc.) to prevent any tragedy. Most deaths by Scouts is drowning-related. Drowning is the most common accident in Scouting.

A *banca* expedition is a little different than a hiking expedition. While you can carry a little extra weight, do not overload the *banca*. After all, you have to portage your *banca* and your equipment, if you have to go up inland on your expedition. Travel as light as possible, just as you do for backpacking.



If your *banca* has an outrigger, it is a lot safer than a *banca* without one. Depending on your experiences and those of your buddies on traveling by *banca*, it is better to get *bancas* with two outriggers. If there are no outriggers, better get *bancas* whose keels are long, and straight and the bottom flat.

Practice steering a *banca* by a paddle. Usually, the steerman at the back (stern) of the *banca* directs the path and direction of the *banca*.

Learn also to portage your *banca* on high ground so you can use it again during your return trip.

It is imperative that non-swimmers in the group have some floatation device.

## By Motor Vehicle

There is no faster way to see the Philippines except by motor vehicle – a car, or bus, or rented cargo truck. Provide for relief drivers, set a reasonable (and legal) speed limit, and have a good road map. Your road map should show the places where you want to go and which you want to explore.

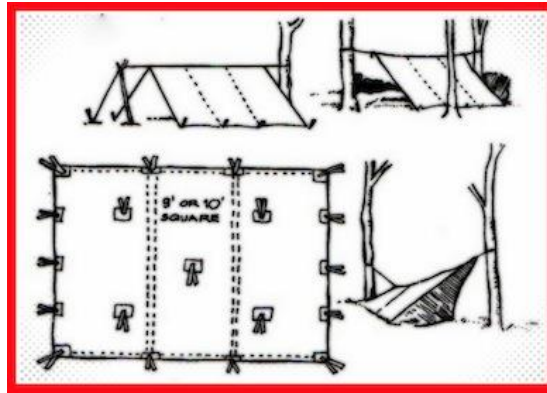


If the area is relatively safe from bandits or evil men, bring your vehicle as close as you can to the edge of the wilderness; but when you get there, let your legs take you beyond reach of your vehicle so you can really see the countryside.

Some national parks all over the Philippines have good park guides for further inland or island explorations. Take advantage of these opportunities to learn about the Philippines.

## ***A WORD ABOUT TENTAGE***

Senior Scouts can have a choice of tents to be used in a camping or expedition. You can experiment with using all of them and later select and make one which will fit your needs.

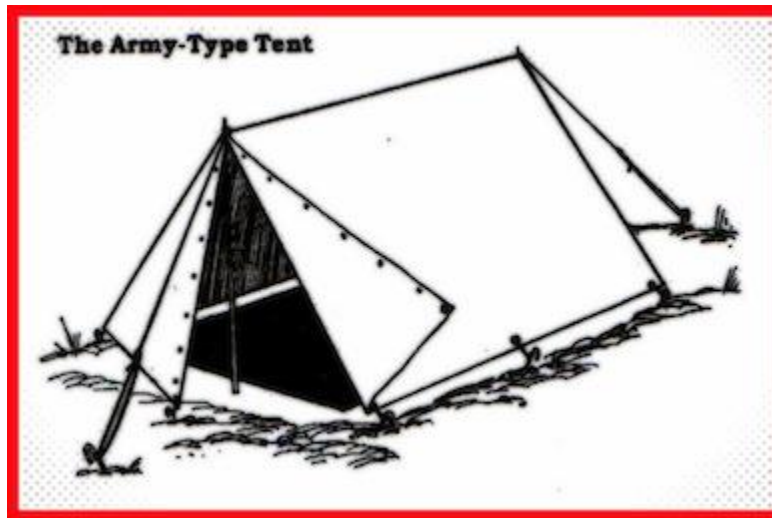


A tent is your “home away from home.” It must do more than just keeping the rain out. It must be comfortable inside, keeping the cold out and the heat in. It must protect you from insects, snakes, and those little night rascals that hunt for midnight snacks in your pack. Your tent must protect your equipment in your absence.

Modern tents are usually made of nylon material, suitably weighted, and almost all waterproofed. A few of the common tents are described below:

### **The Army-Type Tent**

This is the simplest shelter tent. It is of rectangular shape supported on a ridge pole; sapling, or stretched rope, with the sides pegged to the ground. This tent has end flaps which serve as curtained doorways and snugged down tightly at night.



### **The Dome Tent**

This is made of modern nylon textile and it has at least 2 flexible and collapsible fiberglass or aluminum tent poles. It is generally very easy to set up and very secure and rain-proof.

### **The Mountain Tent**

This is a more expensive type of tent when extreme lightness is paramount for easy back packing together with stability in high wind situations.

### **The Trail Tent**

This is made of a flat piece of waterproofed cloth, three meters square with ties as shown on the sketch. It can be set up in many forms, used for a ground cloth, or even doubles as a sail for a *banca*.

If you want to make one, you need 10 meters of inexpensive unbleached muslin or sack cloth or plastic sheet, 1 meter wide, and about 15 meters of 2-cm. Cotton type. Cut the cloth into three equal lengths; sew them together along the long edges using a double fold seam. Afterwards sew in the tie patches and ties as shown, making the ties of 50-cm. pieces of tape folded and sewn into a cylinder or "lace."

Some Senior Scouts want to have their trail tents colored before waterproofing. If you do, use color-fast dyes (such as Joe Bush dyes). Place the contents of 2 small packs of Joe Bush dyes in a large vat or drum of 4 gallons (16 liters) of boiling water and stir for 2 minutes. Then wet your tent first in cold water before you place it in the vat containing the dye so that the cloth will absorb the coloring evenly. Let it stay in the dye for about 10 minutes, then remove without wringing and hang the trail tent under a shade.

The Ranger Formula for waterproofing is, as follows: Dissolve 1/4 kilo of alum (*tawas*) in 4 gallons (16 liters) of boiling tap water. In another vessel, dissolve 1/4 kilo of sugar of lead (lead acetate) in 4 gallons of boiling tap water. Let both solutions stand until clear, then combine both in a large container and again let stand for 4-6 hours. Pour the clear liquid in another large container and in it soak your

tent, working with a stick instead of your hands since the lead is poisonous. Then squeeze out (not wring), stretch, and dry. This kind of waterproofing will shed rain water and resist embers and sparks from the campfire.



### **The Half Pyramid Tent**

Another tent you can try making and using is the half pyramid tent. Being a modification of a miner's tent, it is light, easily handled, and can be set up with only 1 pole and 6 pegs. As shown in the drawing, this tent can be made from 3 meters of materials, cut and sewn. The dimensions in the drawing are in feet, however, since some Filipino stores still sell cloth by the yard rather than by the meter.

### **The Forester's Tent**

This tent is a good "cold weather tent," having an open front facing the fire, yet with flaps if desired as shown. The pointed hood (optional) gives added protection from rain and gathers/holds heat from a reflector fire.

### **The Hickory Tent**

This type of tent has good headroom at one end and a wide storage space at the other end. The slope sheds a heavy rain and will also act as heat reflector for a night fire during cold weather. If you want to make this tent, you will need 66 meters of cloth materials sewed edge to edge in 3.3- meter lengths. The ground cloth is 90 cm. to 1.8 meters.

### **The Baker Tent**

This is a 2-man tent popular in the wilderness because it is easy to make, carry, and set up. You can use canvass to make one. Use a flat seam for joining; round seams for serving the end panels to the back, roof and awning, and a simple hem for all edges. To join the end panels to the back and roof, start from the lower back cover of the wall.. Sew reinforcing patches on the out- side wherever there is a pull from a peg or guy rope.

Other types of tents are now in the market and you may wish to. buy instead of making one. Of course, buying takes the thrill out of making one and prevents you from learning a new Senior Scout skill.



## **LOCATING A GOOD CAMPSITE**

During the past years, our tropical rain forest was largely untouched and the land was teeming with wildlife roaming free, Scouts in those days have no problem looking for a suitable campsite. But as years rolled on, virgin lands gave way to Industrial development, trees were felled to give way to farmland, the forest got smaller and so are favorite camping sites for Scouts. Clearly there is a need to cultivate proper conservation attitude among people to preserve what's left for future Scout's use.

As you hike along, keep your eyes open for a suitable. The ideal campsite must have trees, water, grass covered ground, gently sloping terrain, protection from bad weather, and affords a good view of the surrounding. In selecting a campsite, especially during rainy season, always avoid natural hazards like river bed and water run-off area.

Do not pitch tents directly under trees, since water from tree leaves overhead will continue to drip long after it stops raining. Besides, heavy branches or even whole trees can come down in stormy weather.

Be sure your tent is not pitched on very steep grounds; otherwise, you may wake up in the morning outside your tent or funnier still your whole tent may be wrapped up all around you and your friends will laugh at a "*suman*" Scout.

Spend time in planning the layout of your campsite. A smart Crew or Outfit will take a good look at the total area, using keen observation to pick the logical locations for the dining area, kitchen, latrines, and tents. Check also the prevailing wind direction, possible weather changes, and terrain. When camping beside a river or stream where you will get drinking water, check about 500 meters upstream to make sure that the water is safe to swim in. Be sure to always bring water filters, or purification tablets to make sure of the safety of drinking water.

If you are camping with the whole Outfit, make sure that the Crew/s are camped together close enough for good camp management yet far apart enough for independent Crew responsibility.

### **Setting up Camp**

As soon as you have decided where to put things, the whole group or Outfit should pitch in to do first things first.

Whether it is raining or not, the first thing to do is to set up the dining fly or tent for the protection of all packs and equipment and personnel. When the dining tent is up, then the packs can be opened and all equipment can be readied for use.

It is a good idea when you are camping as a Crew to divide yourselves into 2 groups – the tenting group and the cooking group. After designating and agreeing on the general area to be used by the Crew, the tenting group under the Crew Leader can then pitch all tents and dig latrines, while the cooking group can take care of the cooking area, get firewood and water, dig the wet pit, set up the trash receptacles, and start the cooking fire. With every camper doing his share, the total job of setting up camp should not take longer than three quarters of an hour.

Senior Scout Outfits camp differently from the younger scouts. While they may camp or cook by crews, they do not set up tents in formal alignment. Tent occupants usually pick their own locations in the general tenting area of the campsite. Factors on pitching tents on loose or sandy soil is better than

gravel or rocky ground.

If a public toilet is not available nearby, dig a latrine trench about 20 cm. wide, 1 meter long, and 40 cm. deep. Place the sod nearby so you can use it to cover excreta. Keep away from trees to avoid roots. If possible, locate it in a secluded area downwind; otherwise, establish privacy by putting a tarp or canvas around the latrine. Place toilet paper nearby with a plastic bag over it to protect it from rain. Also, hang a lantern near the latrine to mark its location at night. Don't let flies find excuse to assemble in the latrine area. Remember, A SCOUT IS CLEAN. Also do not put plastic material in the latrine. Toilet paper is biodegradable and is therefore OK to include with human excrement.

## **Camp Beds**

If you are staying only overnight in a place, start by finding a fairly level spot, remove stones and sticks that might poke you. Do not remove dry leaves they will cushion your bed and lessen your impact on the campsite {the simplest (and most comfortable) way of sleeping on soft sod is to scoop out shallow holes for your hips and shoulders to fit into}. Then spread out a ground cloth over it and roll up in a warm woolen blanket or sleeping bag.

Another is, if you have a sleeping pad, lay it on top of the ground cloth and arrange your sleeping bag or blankets on the pad.

If you are camping longer, you may want to make a browse bed as long as you are in the deep jungles and where tall grasses (such as *talahib*) are abundant. DO NOT CUT DOWN BRANCHES just to make a browse bed. It is against environmental conservation practice nowadays. A browse bag can also be made out of poncho or ground cloth folded like a bed and stuffed with dry leaves, straw, or dry grass.

You can also make a straw mattress, using a camp loom and rice straws or *talahib*.

If you have an army stretcher canvas, you can bring it to camp (minus the wooden poles) and use it as stretcher bed. This is very comfortable and will also give airspace between the ground and yourself.

## **Low-Impact/NO-Trace Camping**

The modernization and development of our nation have turned majority of our vast tract of lands into industrial and commercial sites. What used to be the home of a variety of animals and plants were converted into farms and residential areas. Dams have tamed many rivers. Trees have become lumber. Animals are in the verge of extinction. Unless we do something and preserve what is left of our forest, we will suffer the wrath of nature. The wilderness that we use in camping and expedition is the only land that is left for us to protect. This land gives us clean water to drink, freshens that air we breathe. When you want to get away from the city, you have the freedom to enjoy the beauty of nature, to experience the serenity of the forest. With that freedom comes your duty to care for the land. This means that you have the moral obligation to preserve and conserve everything you find there; enjoying the outdoors, learning from it and then leaving it just as you found it. Scouts call this low-impact camping. As Scouts we must learn how to hike and camp without leaving a trace.

## **Breaking Camp**

A good rule to observe in camping and expedition is "Make sure that you leave a campsite better than when you found it." If you follow this rule, it will earn you a welcome back.

Brush off any dirt or leaves from your camping gear before you pack them. All improvised structures should be taken apart and the poles scattered naturally or piled, according to the wishes of the property owner. Natural materials used for ground beds should be scattered instead of leaving them piled. Carefully replace sod removed including the grass on top of it. (If you were careful in digging ditches and trenches such that the grass can be turned over and preserved as you dig, you will have little trouble returning it on the dug areas).

All pits should be covered. Latrines should also be covered and an “X” sign with 2 crossed sticks should be placed over the covering to prevent others from digging in the same spot later.

All non-biodegradable trash in camp and around your camp should be placed in plastic trash bags and carried out of the campsite and disposed of in a proper place such as the sanitary landfill of the municipality.

Do not leave buried trash in the camp group as this will surely destroy the campsite for future use. Don't leave pegs in the ground. They are hazards. Have all pots and pans thoroughly cleaned before they go into the packs. Dry all tents and canvas before storing them. In case you break camp in rainy weather and the tents are wet, lay them out to dry at your Outfit Head-quarters before putting them away.

Before leaving the camp, have a once-over glance. Be sure there are no canny wrappers, cigarette butts, etc. scattered around the camp. Leave nothing behind except your thanks. Remember the wise advice of a veteran camper –

*“Let no one say –  
and say it to your shame,  
That all was beauty here  
until you came.”*

*“But let everyone say –  
and say it to your fame,  
That all is beauty here  
because the Scout came.”*



## Chapter 9: Backwoods Engineering



No one can call himself a true Senior Scout unless he has the skill of a backwoodsman. Improvisation has always been a byword for 'creative' Scouting.

Backwoods engineering is the art of making and constructing improvised camp gadgets and at the same time improving the environment. Proper knowledge in making good use of nature's resources to improve one's environment in camp while enhancing the overall ecological balance starts with the skills in ropework. Then knowledge and skills in the use of the Scout knife, bolo, and axe are essential in doing pioneering projects.



## ***TYING THE RIGHT KNOTS***

It is important to know what knot to tie for what purpose and how to tie it properly.

Scouts need to know how and when to use knots in hiking and camping, for setting up tentage and improving camp life, and in pioneering or boating, or airmanship.

Scout knots have three basic characteristics:

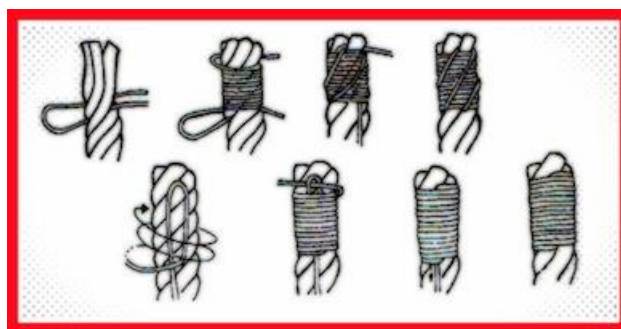
1. They are easy to tie.
2. They are easy to untie.
3. They hold fast when under strain.
4. They are suited to the job.

In the olden days, primitive man used vines, tough tree barks, and plants twisted together, and even strips of animal hides and leather to fasten things together. Today, ropes, cords, and twines are the more modern means to attain the same end. Farmers and fishermen use them frequently.

**Rope Making.** When a few fibers are twisted together towards the right, they form into yarn. A few yams twisted together to the left form a strand. Three strands twisted together to the right form a rope, and three ropes twisted together to the left form a cable.

Thus, a 30-centimeter rope may have as many as 300 individual threads and the force of each thread straining against the others gives holding strength to the rope. If you separate the ends of a rope, you will notice that its ends will fray and gradually unravel. It is necessary, therefore, to “whip” the ends of the rope.

To whip the rope ends, make about 5 or 6 turns of yarn about 2 cm from the rope edge towards the end, pulling each turn as tightly as possible. Lift the end B (see illustration), then make several more turns until about 1 centimeter from the rope edge. Lay the other end of the whipping yarn (E) as shown and continue to wind over it for 4 or 5 more turns. Pull end E until the loop is drawn under tightly. Cut off the ends of both B and E to finish the whipping.



## **KINDS OF KNOTS**

There are many kinds of knots used for various purposes. They can be grouped into the following, according to purpose:

A. **End knots.** End knots are tied at the end of ropes to prevent the whole rope from being pulled through a pulley block or a hole. The overhand knot, figure-of-eight knot, and stevedore knot are end knots.

- Overhand knot – the simplest end knot.
- Figure-of-eight knot – used not only as end knot but also for tying packages.
- Stevedore's knot – used as end knot for slippery ropes.

B. **Knots Used for Joining Lines.** You use these knots when you want to join two pieces of rope together, even of unequal diameter. The common knots for joining are the square knot, sheet bend, and fisherman's knot.

- Square knot – used in tying bandages.
- Sheet bend – especially used for tying two ropes of unequal diameter.
- Fisherman's knot – used for tying two nylon cords or fishing lines.

C. **Hitches.** These are knots which are used to anchor or tie an object to a post, pole, or ring. These include half-hitch, 2-half hitches, clove hitch, taut line hitch, rolling hitch, timber hitch, manharness knot, highwayman's hitch, scaffold hitch, and marlinspike hitch.

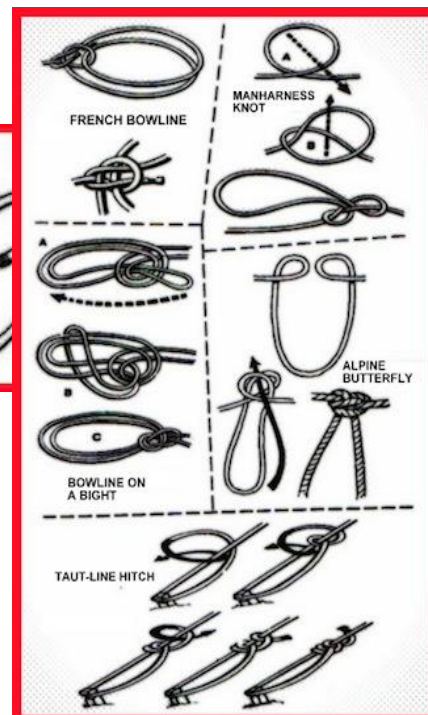
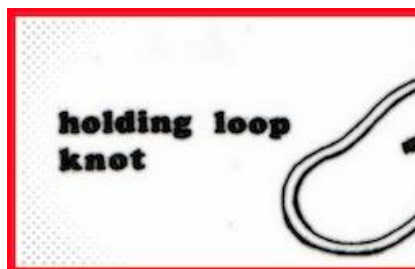
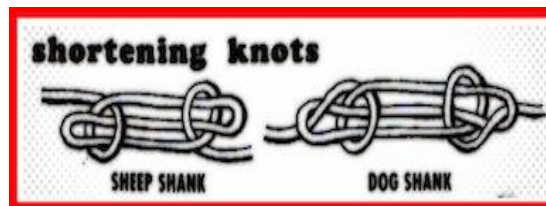
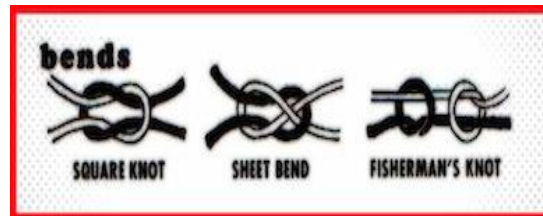
- Half-hitch – temporary hitch around an object.
- 2-half hitches – used to moor a boat, or anchor a clothesline.
- Clove hitch – for starting and finishing most lashings.
- Tautline hitch – to tie tent guy lines. Can be loosened or tightened with the line under strain.
- Rolling hitch – also called pipe hitch. Used to lift cylindrical objects in vertical position.
- Timber hitch – used for hauling logs.
- Highwayman's hitch – used in going down steep ravines or tall trees and then retrieving the rope.
- Scaffold hitch – used in holding up scaffoldings of both ends.

D. **Shortening Knots.** These are knots that are used to shorten ropes that are too long instead of cutting them. The common ones in this group are the sheepshank and the dogshank.

- Sheepshank – shortening a rope whose ends are not free.
- Dogshank – shortening a rope whose ends can be passed through the shank's loops.

E. **Holding Loop Knots.** These knots form permanent loop according to the size they are carrying, or “running” loops to adjust to varying sizes. The loop knots include bowline, French bowline, Spanish bowline, and the rover noose.

- Bowline – used for rescuing or lifting conscious persons.
- French bowline – used for rescuing or lifting unconscious persons in a sitting position.
- Spanish bowlines – used in looping around cylindrical objects (e.g. bottles, drums, etc.).

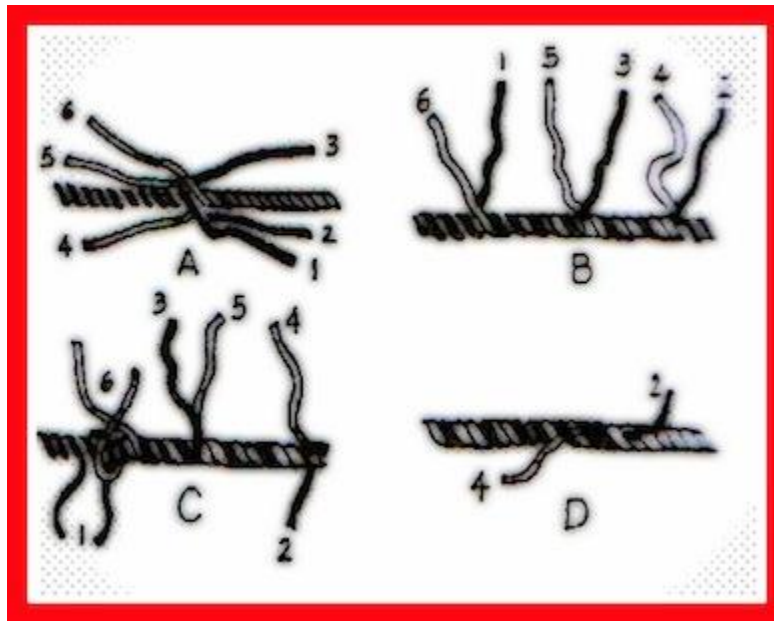




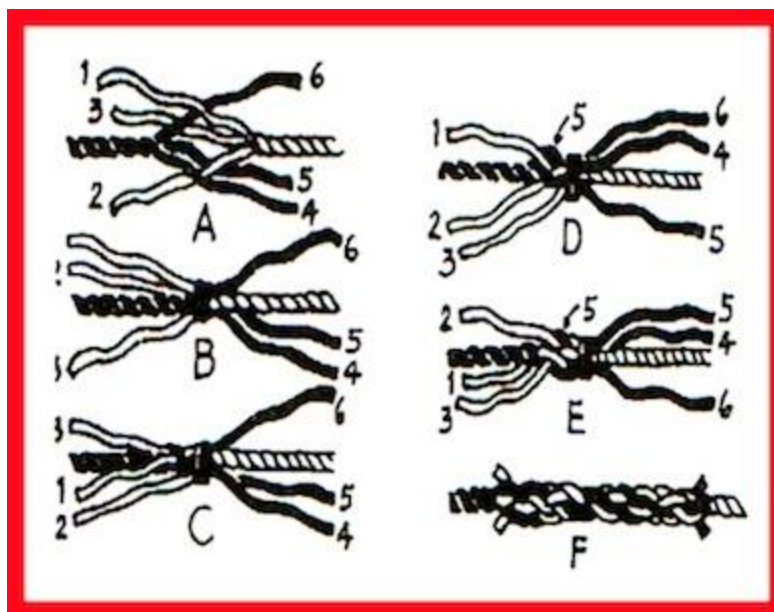
## ***SPLICING AND LASHING***

Splicing is the weaving together of rope strands to protect a rope from fraying, to join two ropes together or to create an eye in a rope end.

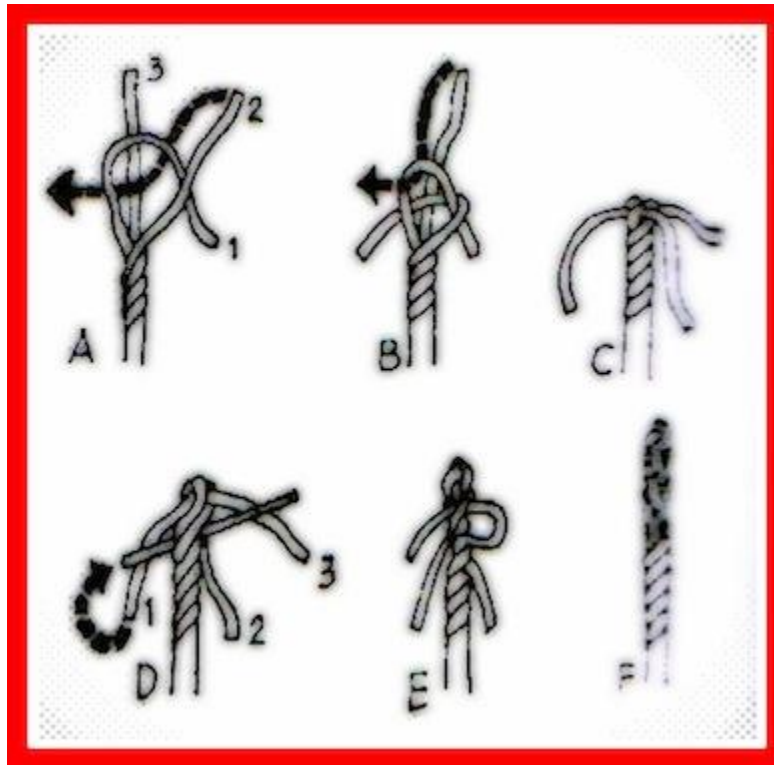
The long splice is used to join two ropes of the same diameter and allows the joint to pass through a pulley block.



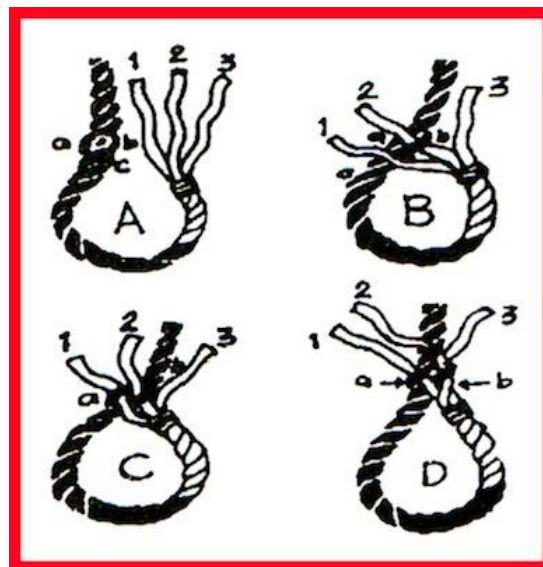
The back splice is superior to rope whipping and is permanent.



The short splices also used to join two ropes and can be made faster, except that the joined part might not pass through a block.

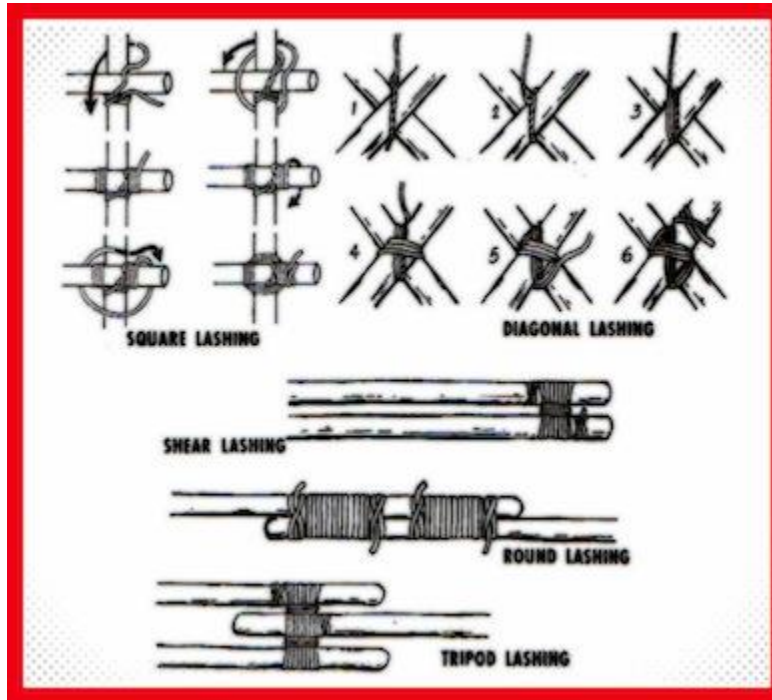


The eye splice is a permanent loop at the end of a rope which is used for mooring or anchoring around a post.



## LASHINGS

The square lashing is used in tying together two perpendicular spars. The diagonal lashing is used in preventing diagonal braces from spreading apart. Shear lashing is used to join parallel spars meant apart flagpole, for instance. Tripod lashing is used to lash together three spars to form a tripod. Floor lashing is done when you want to tie together several spars side by side to form flooring such as on a raft or a cabin.



**Lashing** is the process of binding two or more spokes together without nailing. It may be a square lashing, diagonal lashing, shear lashing, tripod lashing. The illustrations show the use of each lashing and how each lashing is done.

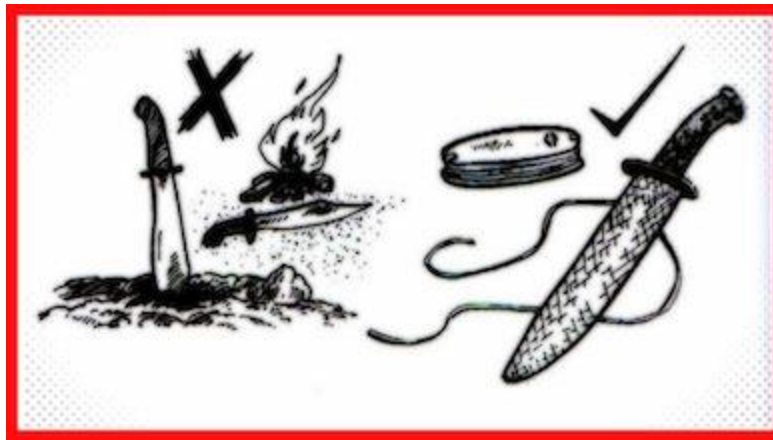
## ***USE OF KNIFE, BOLO, AND AXE***

With knife or bolo and axe you can do many creative and constructive things during hikes or in camp if you know how to use and care for them.

Your knife or bolo must be always kept sharp because a dull or blunt one is dangerous to the user, the work, and the bystanders. Hone your knife or bolo on fine stone to a smooth, thin edge that will not show when held edgewise to the light. Draw it tightly across the edge of a sheet of paper. If the paper is cut smoothly, it is sharp enough.

Keep your knife or bolo dry and do not stick it in the ground. Keep it away from fire. Keep your folding knife folded and your hunting knife or bolo sheathed when not in use. Do not play around with your knife or it may hurt you or other people.

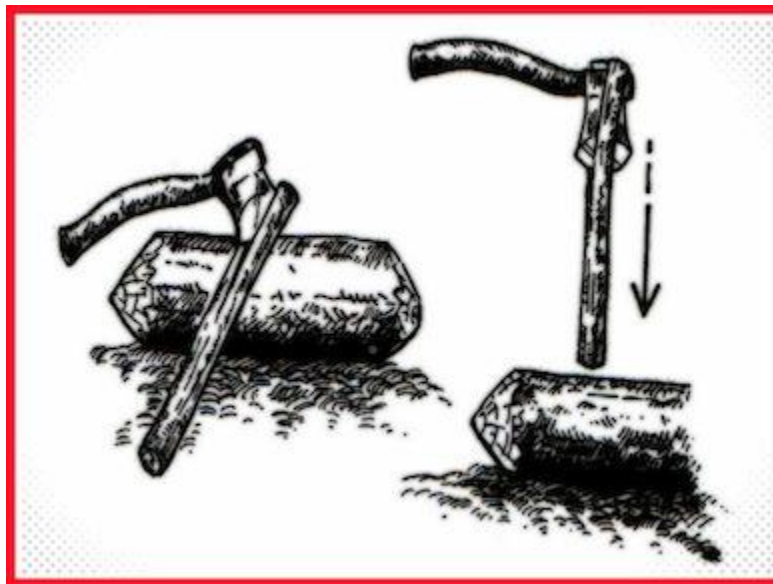
A knife may be used for whittling wood to carve objects such as a neckerchief slide, for instance. It is also used to prepare food or to make a fuzz stick for fire building.



On the other hand, a Scout axe is basically for firewood cutting. A one-half kilo axe head is right for your use. Of course, you must always keep it sharp like your knife by using an ignition file, the kind that garage mechanics use to remove corrosion from spark plugs and contact points. Cradle the axe in your lap and run the file away from you over the toes of the cutting edge. Work both sides of the blade. Afterwards draw the cutting edge across a piece of wood to remove wire edge.

In using the hand axe for splitting small pieces of firewood, place the stick against a log and hit it at an angle to the grain exactly where it touches the log.

To split wood, place the axe blade in a crack with the grain, lift both axe and wood up and bring them down on the chopping block.



At present, it is prohibited by law to cut down large or even growing trees, so you have to be contented in logging already-felled trees. You can “lop” the branches of a felled tree by chopping towards the top of the trees. Stand on the side of the trunk opposite the branch you are cutting. Afterwards, you can “log” the tree trunk; that is cut the trunk into suitable lengths – each not more than twice the thickness of the tree; Use V-cuts on one side of the log until about  $\frac{3}{4}$  of the thickness of the log. then, slice on the other side until the tree is completely cut.

In addition, the following rules must be observed in using your knife and axe.

**A. When Using Your Knife or Bolo –**

1. Whittle away from you to prevent injury.
2. Beware of wood with nails in it.
3. Do not drive a knife into a stick by hammering on the back of it.
4. Keep your knife out of the fire.
5. Keep the blade clean; scald the blade before cutting food.
6. Do not carry an open knife in your hand.
7. Do not use the blade as a screwdriver or to pry things open.

**B. When Using Your Axe –**

1. Never chop in such a position that the axe will cut you if it slips.
2. Never chop through wood on a hard surface.
3. If you are carrying an axe on your shoulder, the cutting edge should be outward from your neck; otherwise if you stumble, you might be killed.
4. Always, cover the axe head when traveling. When carrying the axe by the hand, grasp the handle close to the axe head with blade down and outward.

## ***CAMP FURNITURE***

With your knife or bolo and axe and your knowledge in knot-tying and lashing plus some spare time, you can make some camp conveniences to make you more comfortable in camp, especially if you are staying for more than two days. You can make benches, hanging shelves, washstands, or a hammock or swing. A camper should never be idle in camp, since there are a hundred and one things to do between meals.

You can save and use discarded tin cans, twine or rope, paper, vines, leather thongs, and other things which ordinary people throw away. Besides helping in preserving the beauty of the environment, you can use these discarded materials to make camp life more exciting. Of course, after they are used, your camp gadgets should be dismantled and then buried (especially tin cans) or else they should be brought home to be used in your Senior Scout Headquarters.