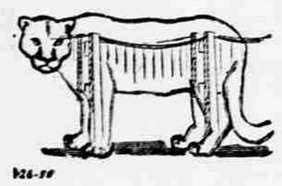
Is That So?

By Eugene Burns
Ranger-Naturalist

Among the most marvelously engineered objects ever created is the framework of animals—the skeleton.

Whether for a 100 - foot long whale or a three-inch humming bird, the architectural principals involved are the same—employing those which a modern engineer might use to biuld a suspension bridge, a cantilevered building and a vaulted auditorium.

With this difference, The human engineer isn't born who could design a complete skeleton for an animal so that each piece would have the maximum lightness, being reinforced with



art and subtlety where additional strength is needed; flexible yet sturdy enough to withstand shocks, and withal observing a wonderful economy of space.

Besides, as the function of each member of that framework differs, so too must design of that individual bone, whether it is intended to encase the brain or the tiny pituitary; to house the lungs and permit expansion; to give attachment to muscles for moving of the body, or to provide self-lubricating joints.

This is to say nothing of its assembly, the whole framework being held together not with nails and bolts but with bands of tough sinews—ligaments.

Intricate as this may sound, add this: the skeleton, however rigid must allow for growth, so that the framework can grow with the body. Or, when growth is done, and the skeleton becomes partly non-living, that it still retain enough life for self-repairs should a bone break.

But even this it not all. In each species, the skeleton differs so that it can best meet the needs of the creature it supports and protects in its special way of life. (I mention nothing of individual adjustments — stout or slender, tall or short, male or female — variations which the skeleton acknowledges and to which it makes adjustments).

Few Variations

Consider just a few of the specias' variations:

One skeleton calls for sturdy shovel - shaped hands and a wedge-shaped skull. It is the mole, demanding perfect tools for tunneling in search of edible grubs.

Another needs fins. It is the seal and the weblike fins assist it in swimming.

Yet another must have an armored tailplate attached to the hip bones. It is the pigmy armadillo. The heavy bone plate, like an attached shield, protects its rear when it pokes its head down a hole dug with its forefeet claws.

Still another demands a powerful set of forelimbs, hollow and light, to be used as wings. It is the heron gull. A muscle connects the wingbones with a keel-like breatbone which anchors the heavy muscle deep in the bird to help preserve its balance in flight.

What variety! Each wonderfully efficient. Legs for walking and running; legs for clawing and digging; legs for climbing and swimming; legs for flying and diving — all assisting the owner in his scramble for food and avoiding enemies.

The wonderful development of the framework of backboned animals can be found in animals living today. The beginnings can be seen in a tiny, transulucent little creature, more primitive than the lowliest fish. Here the skeleton is merely a long slender, unjointed elastic rod running from one end of the body to the other. Yet it presages great things — the segmented backbone.

Next, in the lampreys, sharks and rays the backbone consists of flexible cartilaginous (gristly) material.

More advanced, in the primitive land-dwelling newt, a body skeleton has formed. Here you find a bony skull; long loops, forming ribs, to encircle the lungs and heart; and outside this cage you will find bony limb birdles and limbs attached thereto.

In the more advanced orders, such as the horse, mountain lion, or the human, much of the skeleton is preformed in gristle during the embryonic stages. After birth, these cartilages are gradually replaced by bone in most of the skeleton.

Series Of Wonders

And in this transformation from gristle to bone another wonder—rather a series of them—continues. At specific bone-building centers in each cartilaginous rod—usually three in number, at each end and in the middle—the cartilage is gradually eaten away while bone substances are secreted. In man, the replacement is completed approximately the 20th year of life—when growth ceases. The cartilage, meanwhile, allowing the body to grow.

But yet, regardless of age, some cartilage persists. And that is good. It remains at joint surfaces, thereby providing smooth, friction-reducing pads which absorb shock. These in turn are sealed and filled with a watery liquid: a true, sealed lifetime oiled ball-bearing, sometimes engineers have just come up with—yet in animals it has been in existence for millions of years, if not longer.

Free: By special arrangement with the editors of the Encyclopedia Americana, my panel of judges will award each week to the reader who sends me the best question on nature and wildlife a complete 30-volume set of this world-famous reference work in a handsome Sealcraft binding.

Each week, new questions will be considered. Sorry, I simply can't answer your many friendly letters. Please address your questions to: IS THAT SO! c/o Medford Mail Tribune, Box 375, Sausalito, Calif.

SO THIS IS SPRING!—The Canadian customs house at Niagara-on-the-Lake near Fort Erie, Ontario, has been pushed 30 feet from its original location and is badly damaged by Lower Niagara River ice jam. The jam is described as worst in 46 years. Ice formed at the mouth of the river extends in nine-mile stretch and reaches 30 feet high in some places.

Around Hollywood

By ALINE MOSBY
United Press Correspondent

Hollywood—(U.P.)—This year's Academy Awards show on television will be history-making.

Aline Mosby

For the first time in many years all the glamorous nominees will show up.

Entrants in the Oscar Derby usually are on location or claim they're home with a cold. Last year Marlon Brando allegedly sent a cab driver to the event in case he won a statuette.

But this year Jean Negulesco, director of the Oscar show, hatched the idea of luring the wandering nominees into the program as presenters of awards.

Stroke of Genius

"It was a stroke of genius," he said modestly. "People like to see the nominees. Instead of sitting in the audience with egg on their faces and applauding the winners they are to be a part of the show."

Even the elusive Grace Kelly, Marlon Brando and Bing Crosby will be seen. Nominees Nina Foch, Eva Marie Saint, Karl Malden and Dorothy Dandridge will be telecast from New York. Audrey Hepburn will appear via film from London.

The plot for this year's telecast was revealed at an unusual press conference. NBC set up a closed circuit broadcast — not heard by the public — and rounded up the press and network and academy officials in New York and Hollywood. The two groups chatted about the program with the New Yorkers noisily eating lunch and clinking glasses over their microphone (it was noon there).

Each year the press complains about the Academy Award routine, and this year's questions went like this:

Q. Why weren't the Oscars handed out as the TV Emmys with the dull technical awards omitted from the national telecast?

A: (indignantly) Actors are no more important to us than technicians. These awards are made by industry workers to their fellow workers.

Want to be Fair

Q: Why aren't the second and third place runners-up revealed?

A: It wouldn't be fair to the winner or the losers.

Q: Why did Frank Sinatra refuse to sing "Three Coins in the Fountain," which he introduced to the scene, despite the fact the writers (Sammy Cahn and Jule Styne) asked him to?

A: Frank already appears on the show as a presenter because he is last year's winner, and he felt it would not be gracious to appear twice. Dean Martin will sing the song.

Q: Why are winners pushed off the stage and not allowed to give thank you speeches? They used to be very colorful and now the Oscar awards are cut and dried.

A: The TV show has a very limited schedule.

Q: A television commentator (Sidney Skolsky) predicted if Brando doesn't win academy members will resign in droves.

A: Sheer nonsense.

Q: What was the New York press eating that sounded so good over the microphone.

A: Filet Mignon and string beans.

Salem — (U.P.)—Gov. Paul L. Patterson has signed a bill increasing the minimum salaries for Oregon teachers from $2100 to $3000.

Uranium Hunt Grow In Portland Vicinity

By UNITED PRESS

A hunt for radioactive minerals was on in Portland and nearby areas Saturday.

Prospectors in Clark county, Wash., and Clackamas county, Ore., hunted uranium with dreams of riches in their minds. Authorities hunted a capsule of cobalt with the hope of peventing serious injury or possible death.

The county clerk at Vancouver, Wash., said he was kept busy all day Friday asking questions from prospective prospectors. A variety store in east Vancouver stocked Geiger counters. The interest began when two men filed uranium claim locations covering the Maple Pit rock crusher.

The clerk's office said complaints have been received about uranium hunters trespassing on private land.

At Oregon City, County Clerk Guy Pace said the number of claims filed on radioactive mineral deposits in the Wilhoit Springs area of southeast Clackamas county had reached 34. Discoverer of the ore was reported as L. R. Johnson, who formed the Clacko Mining and Assay company at Molalla. Johnson said he found rock showing radioactive reaction while working as an electrician.

Seek Missing Cobalt

In Portland, the search continued for the cobalt capsule that disappeared from its wall recess at the American Pipe and Construction company. The FBI was studying to see if it had any jurisdiction in the case. Authorities repeated their warning that it could cause death if handled improperly.

MYSTERIOUSLY missing from Philadelphia Museum of Art, this painting by Auguste Renoir is objective of search throughout nation. *(International)*