

FLAT SCREEN TV is the first publication by artcodex*. This issue is a bestiary of sorts, collecting illustrated narratives of biological oddities in the natural world. Stories revolve around the themes of invasion, extinction, parasitism and hermaphroditism.

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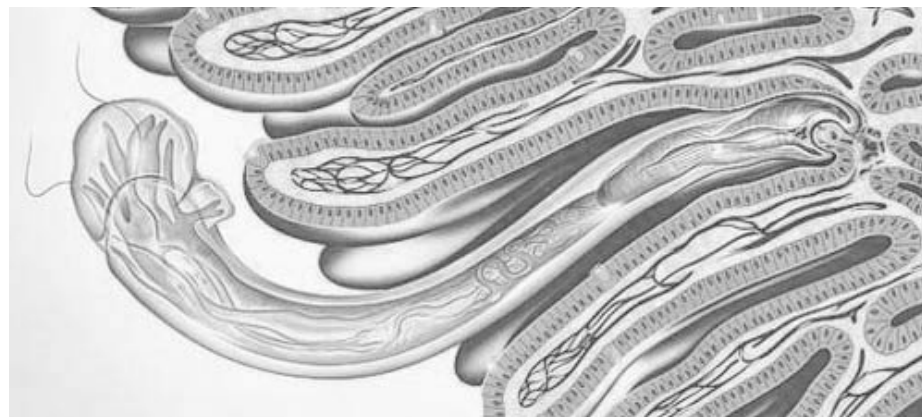
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*artcodex is a loose collective of creative folks who come together to make weird culture, political nonsense, and art battles. You can see more of what we do at www.artcodex.org.



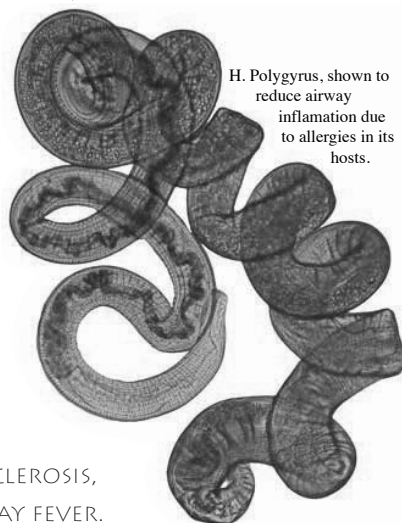
PARASITIC WORMS, ALSO KNOWN AS HELMINTHS, ARE ORGANISMS THAT LIVE INSIDE AND FEED OFF OF THEIR HOSTS, CAUSING DISEASE AND MALNUTRITION. THE PARASITES FIND THEIR WAY INTO HUMANS THROUGH CONTAMINATED FOOD, SOIL OR WATER. WORM INFECTIONS CAN BE PARTICULARLY DISASTROUS IN THE THIRD WORLD, DUE TO THE LACK OF CLEAN WATER, SANITATION AND ACCESS TO MEDICAL FACILITIES. ONCE THE HOST IS INFECTED, THE PARASITE



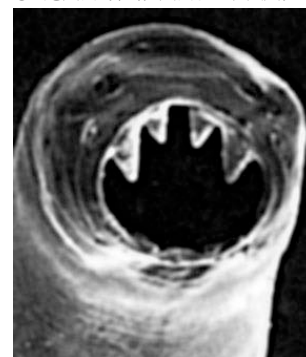
Male *Necator Americanus*, or hookworm, attached to intestinal wall.

ATTACHES TO THE INTESTINAL WALL, FEEDING OFF OF THE DIGESTIVE NUTRIENTS FROM THE BLOODSTREAM. IN ADDITION TO STUNTED DEVELOPMENT AND GROWTH DUE TO THE DEPLETED NUTRITION, THE HOST IS ALSO MORE SUSCEPTIBLE TO OTHER DISEASES. FIGHTING THE INFESTATION PUTS A HEAVY LOAD ON THE BODY'S LYMPHATIC SYSTEM, AND THE PARASITES OFTEN SECRETE TOXINS INCREASING THIS LOAD, LEADING TO AN OVERALL SUPPRESSION OF THE IMMUNE SYSTEM.

IN THE FIRST WORLD, THEY HAVE FOUND A DIRECT CORRELATION BETWEEN THE ERADICATION OF HELMINTHS AND OTHER PARASITES AND THE RISE OF AUTOIMMUNE DISEASES SUCH AS IRRITABLE BOWEL DISORDER (IBD), ULCERATIVE COLITIS, MULTIPLE SCLEROSIS, ASTHMA, ECZEMA, FOOD ALLERGIES AND HAY FEVER.



WHILE GENETIC PREDISPOSITION DOES PLAY A ROLE, EXPOSURE TO THESE PARASITES MAY PROVE TO BE ESSENTIAL IN KEEPING OUR IMMUNE SYSTEMS IN CHECK. CLINICAL TRIALS OF HOOKWORM AND WHIPWORM INFECTION HAVE SHOWN REMARKABLE IMPROVEMENT IN PATIENTS WITH CROHN'S DISEASE, ULCERATIVE COLITIS, AND CELIAC DISEASE. IT SEEMS THAT OUR IMMUNE SYSTEM IS BOTH TAUGHT BY AND REGULATED BY INTERACTIONS WITH MICRO-ORGANISMS AND PARASITES, AND THAT LACK OF SUCH INTERACTION LEADS TO AN OVER ACTIVE IMMUNE SYSTEM THAT RESPONDS IRRATIONALLY TO INNOCUOUS STIMULI SUCH AS POLLEN OR WHEAT.



Hookworm

AS PARASITIC WORMS ARE NOT YET AVAILABLE IN THE US, ENTERPRISING INDIVIDUALS ARE PROVIDING HELMINTHIC THERAPY ON AN EXPERIMENTAL BASIS VIA THE WEB. A SINGLE DOSE OF INFECTION WITH *NECATOR AMERICANUS*, OR HOOKWORM, COSTS \$3,900 PLUS TRAVEL TO AND FROM THE CLINIC. A MULTI-STAGE THERAPY (THREE STAGES OVER TEN WEEKS) COSTS APPROXIMATELY \$7,800 PLUS TRAVEL. ALSO ONLINE, YOU CAN FIND SEVERAL ADVENTUROUS SPIRITS WHO HAVE UNDERTAKEN TRAVEL TO IMPOVERISHED COUNTRIES WITH HIGH RATES OF INFECTION IN HOPES OF BECOMING A HOST. THOUGH MORE RESEARCH NEEDS TO BE UNDERTAKEN BEFORE HELMINTHIC THERAPY WILL BE OFFERED ON A MASS SCALE, WILL AMERICANS ONE DAY VOLUNTARILY INGEST *TRICHURIS SUIS* OVA TO HARBOR WHIPWORMS INSIDE THEIR GUT THE WAY THEY EAT YOGURT CULTURED WITH *ACIDOPHILUS* BACTERIA?

ADDITIONAL READING:

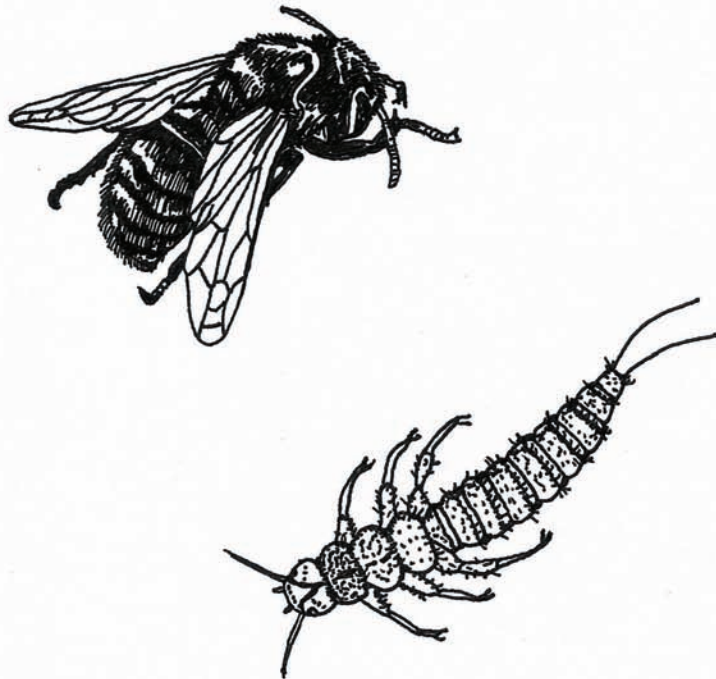
NEWMAN, ANDY. "IN PURSUIT OF AUTOIMMUNE WORM CURE," NEW YORK TIMES, AUGUST 31, 1999.

SVOBODA, ELIAZABETH. "THE WORMS CRAWL IN," NEW YORK TIMES, JULY 1, 2008.

MARK S. WILSON, MATTHEW D. TAYLOR, ADAM BALIC, CONSTANCE A.M. FINNEY, JONATHAN R. LAMB, AND RICK M. MAIZELS. "SUPPRESSION OF ALLERGIC AIRWAY INFLAMMATION BY HELMINTH-INDUCED REGULATORY T CELLS.," JOURNAL OF EXPERIMENTAL MEDICINE. NOVEMBER 7 2005; 202(9): 1199-1212. DOI: 10.1084/JEM.20042572. PMID: PMC2213237

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THE BEE & TRIUNGULIN



DREAMCARD

Tricky Survival Technique

Birds do it, bees do it. The larvae of blister beetles *don't* do it, but, being parasites, they are glad that others do (particularly the bees).

Scientists at San Francisco State University have discovered a remarkable way in which blister beetle larvae get into the nests of bees, allowing them to survive in harsh desert conditions like those in the Mojave in California. The larvae, known as triungulins, clump together into a mass that makes a male bee swoon.

Apparently, the researchers report in *Nature*, a male bee mistakes a clump of triungulins for a female bee (using both visual and olfactory cues), and tries to mate with it. The triungulins respond by latching onto the male. Then, when the male eventually finds and mates with a real female, the triungulins are transferred to the female, who carries them to the nest. There they grow fat and happy, living on pollen provided by the bees.

eat invasive #5



AUTUMN OLIVE
(ELEAGNUS UMBELLATA)

Native to eastern Asia, the Autumn Olive plant was introduced to the United States for cultivation in 1830, but has naturalized in parts of the Eastern United States and is one of the most difficult bushes to control. Though it is now considered an invasive species, the berries of the plant are quite tasty and extremely high in lycopene. Flavor varies from bush to bush, so pick berries carefully.

AUTUMN OLIVE FRUIT LEATHER RECIPE:

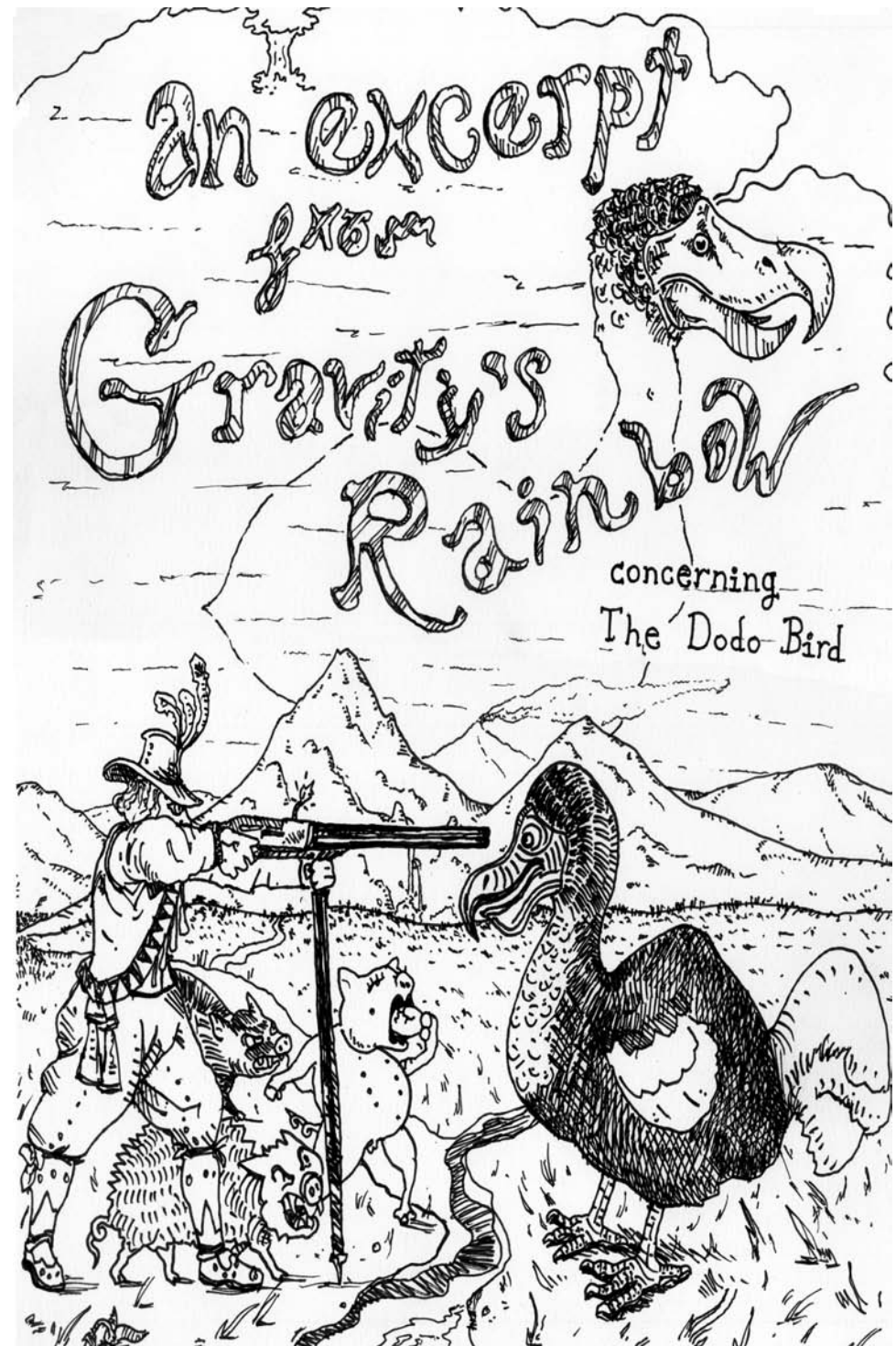
Harvest berries just before the first frost, when they are ripest. Discard stems and wash thoroughly. In a large saucepan, add 1/2 cup water to 4 cups of berries. Bring to a simmer, cover and cook on a low heat for 10-15 minutes, or until the fruit is cooked through. Add sugar or lemon juice to taste. Mash up the fruit in the pan. Continue to simmer and stir until any added sugar is completely dissolved and the fruit purée has thickened, another 5 or 10 minutes (or more). Blend the purée in a food mill or food processor until very smooth. Pour purée into baking sheet, about 1/8"-1/4" thick. Bake on low heat (140 degrees) until the water evaporates and the purée is no longer sticky, usually about 8 to 10 hours. Alternatively, you can also use a food dehydrator.

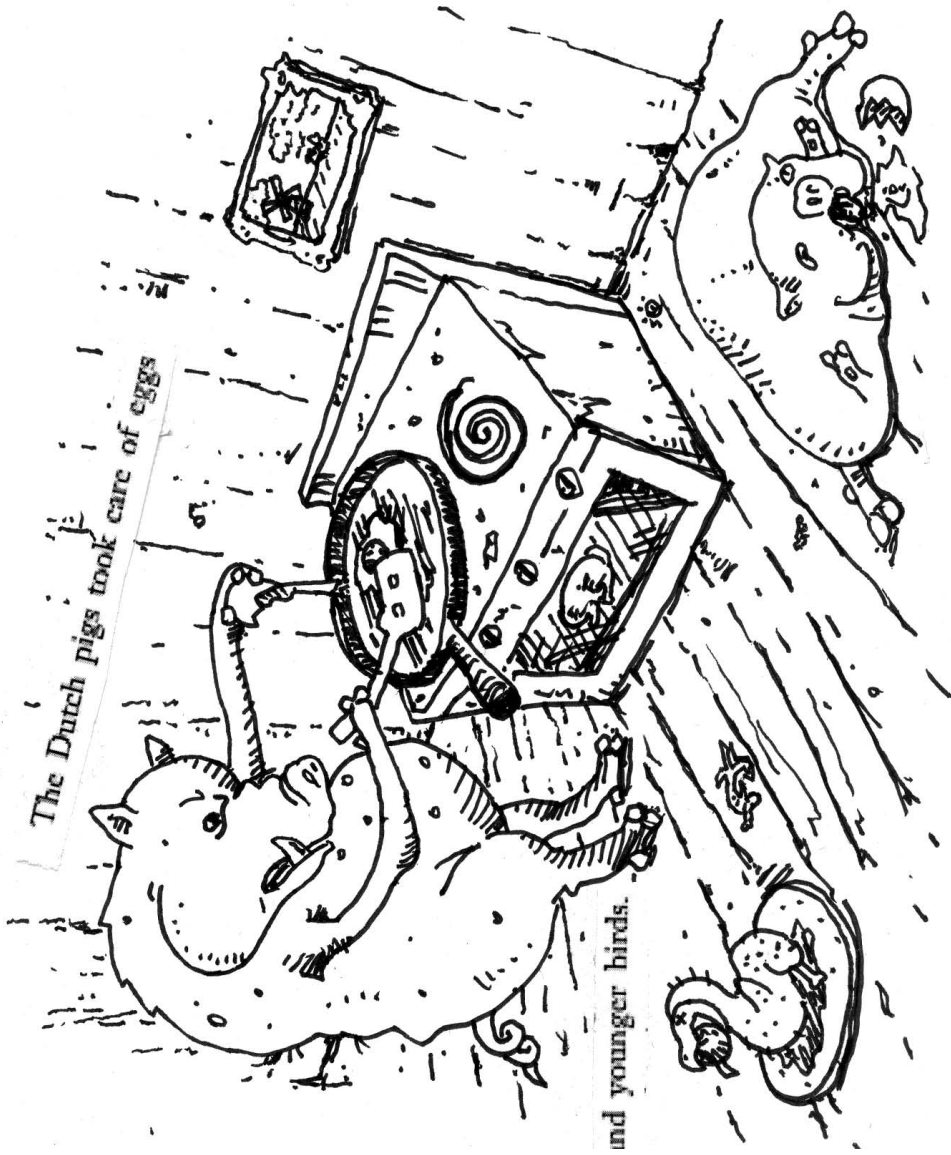
EAT A PIG. SAVE THE BREED!

The Cinta Senese--named for its distinctive white "belt"--is the only native Tuscan pig to have survived extinction. It's a wild pig that roams free eating acorns + chestnuts. The Cinta Senese appears in renaissance paintings + there is evidence that suggests the breed existed as far back as the Etruscan era. By the end of the 20th Century it was nearly extinct.

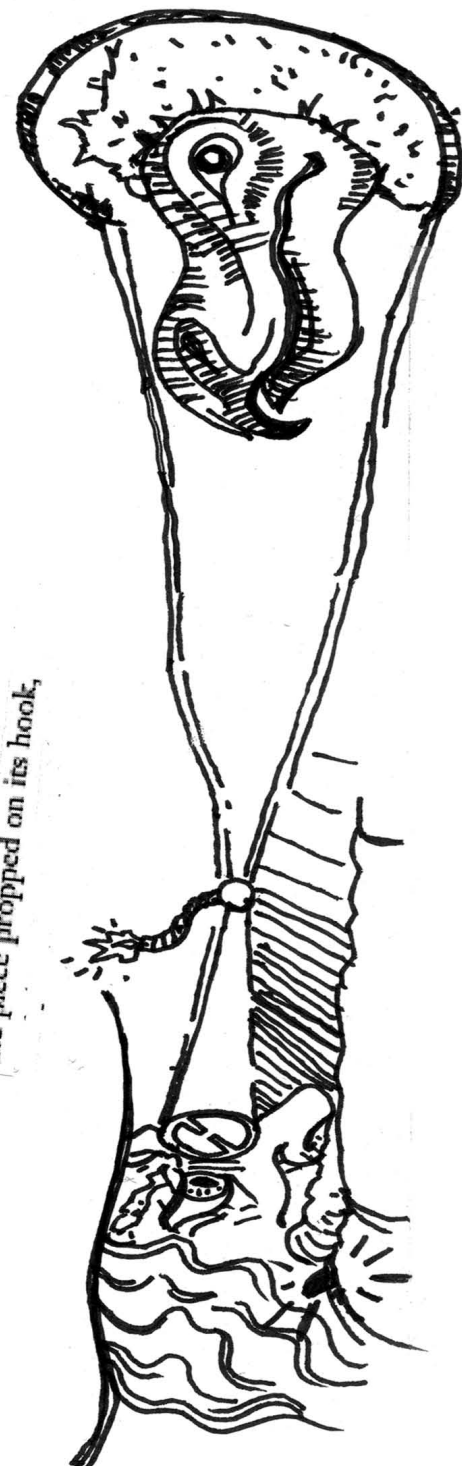


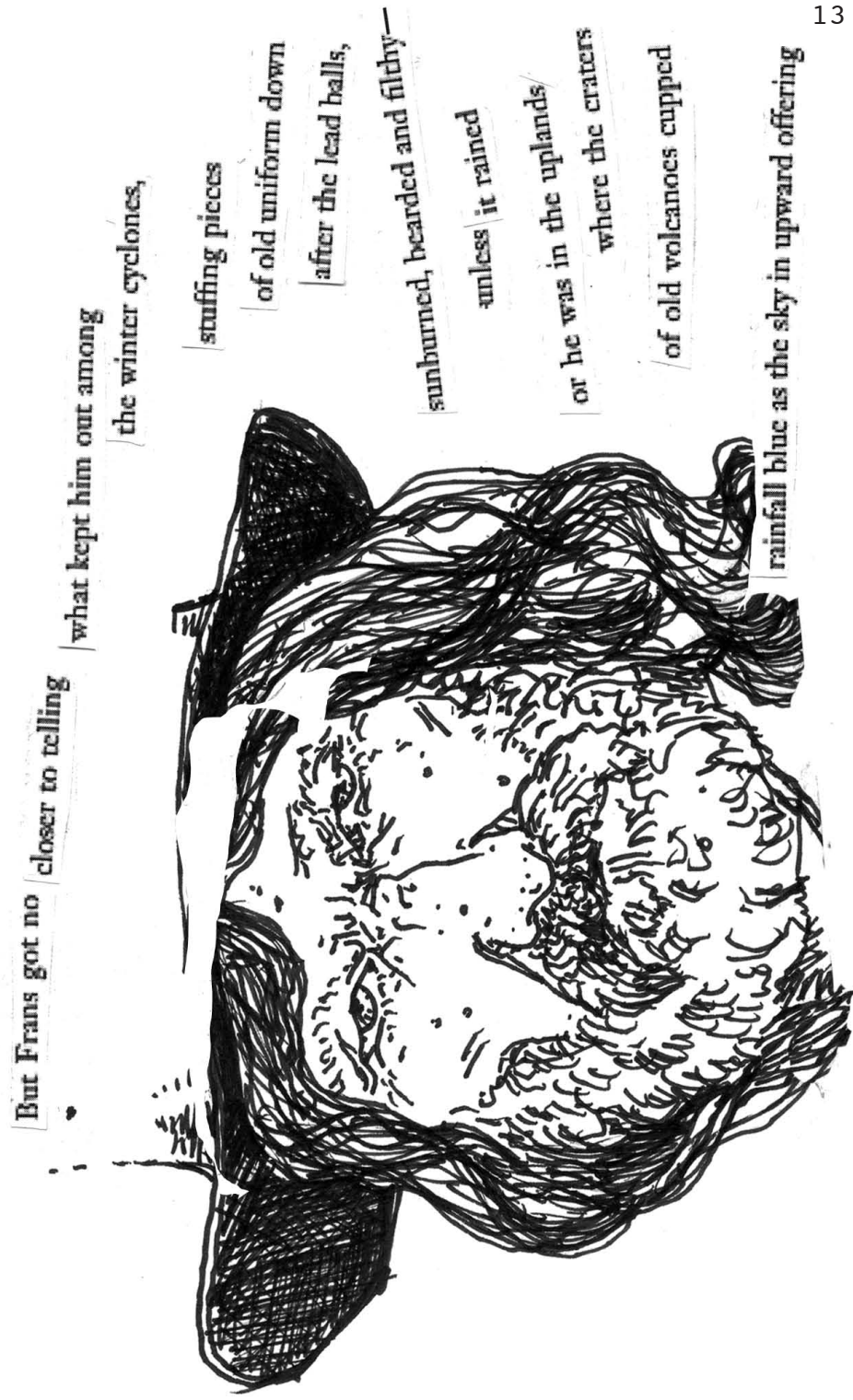
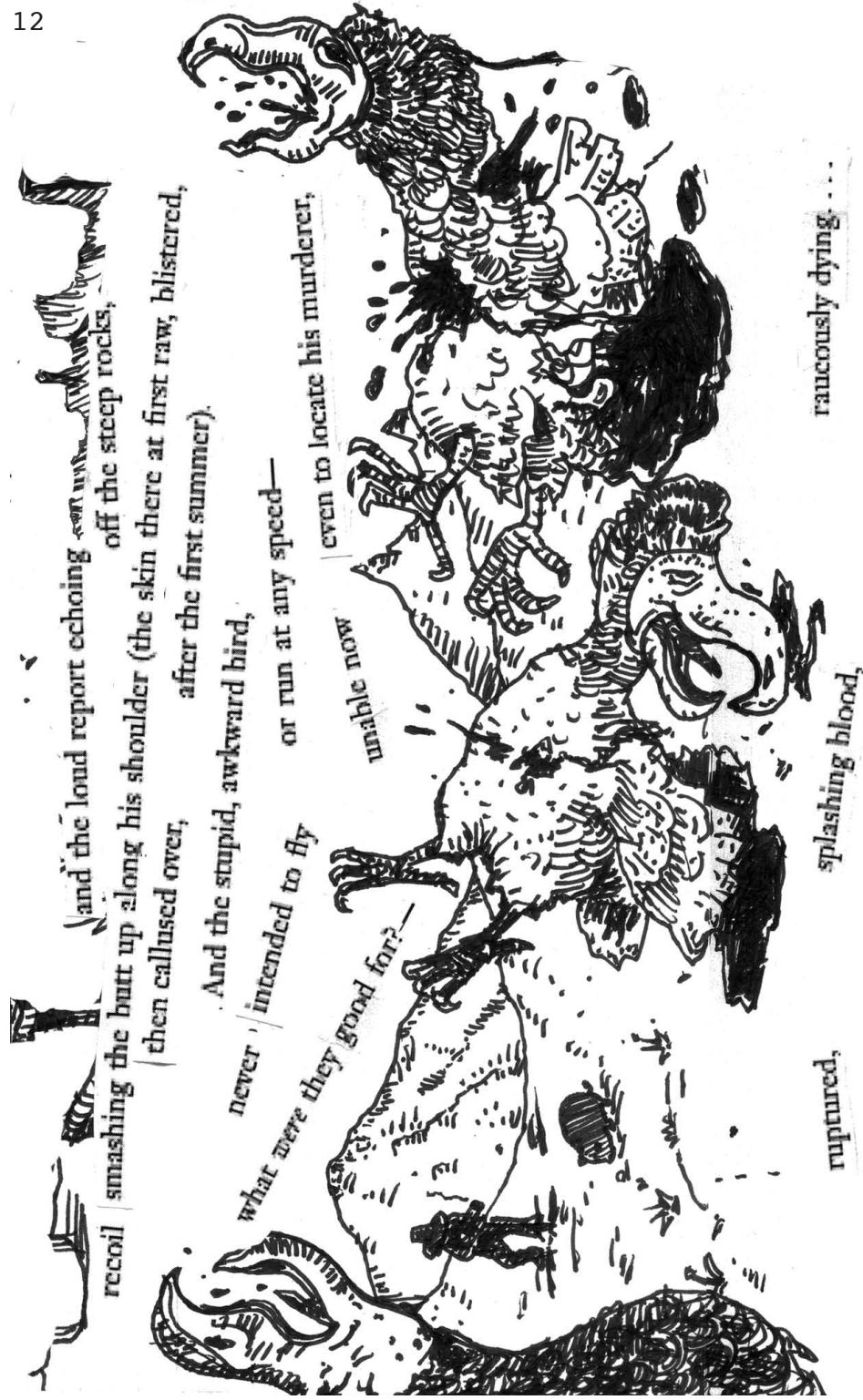
This image is a leaf I found. The circular growths covering it are probably caused by an insect mite of some kind, which was either laying eggs or feeding on the leaf. The insect's behavior causes the plant to produce excess growth hormones, resulting in an abnormal plant structure called a gall. Though they can be deadly often these growths are benign and in some cases are mutually beneficial for both the parasite and the host plant.





the piece propped on its hook,





He left the dodos to rot, he couldn't endure to eat their flesh. Usually, he hunted alone. But often, after months of it, the isolation would begin to change him, change his very perceptions—the jagged mountains in full daylight flaring as he watched into freak saffrons, screaming indigos, the sky his glass house, all



Once he sat all day staring

at a single white dodo's egg

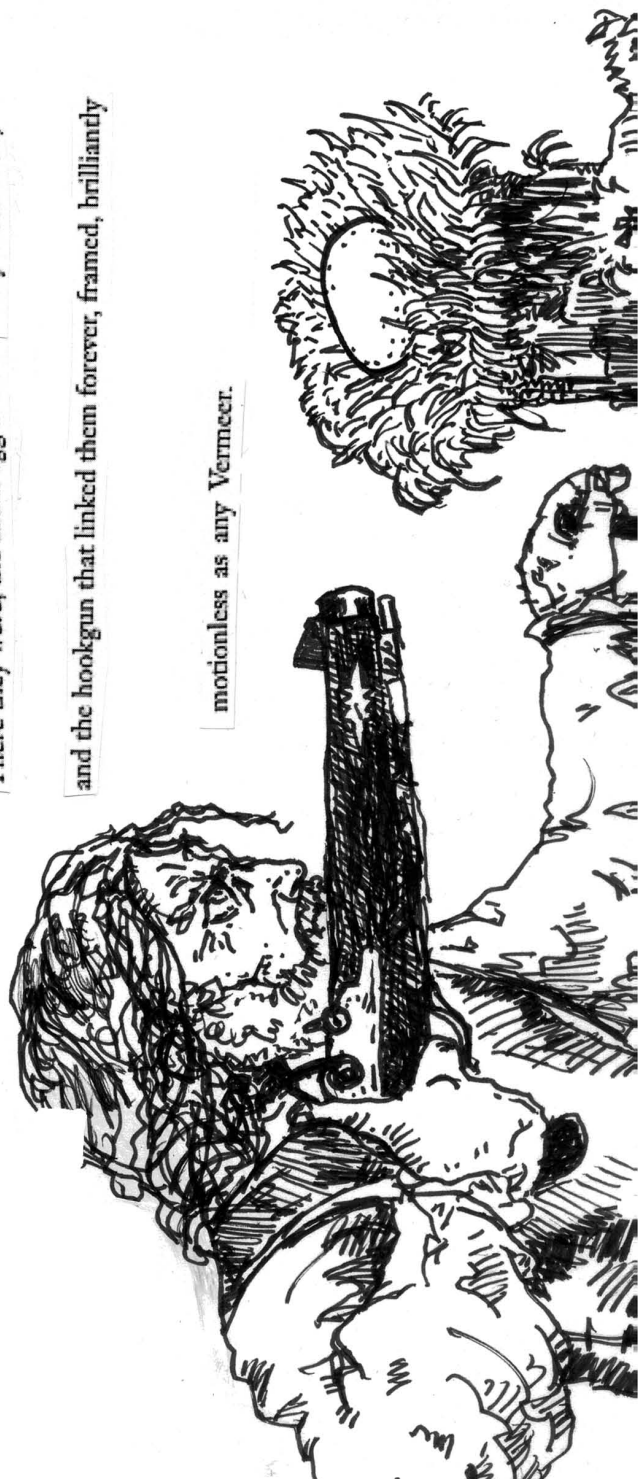
in a grass hummock

He waited for scratching, a first crack reaching to net the chalk surface:

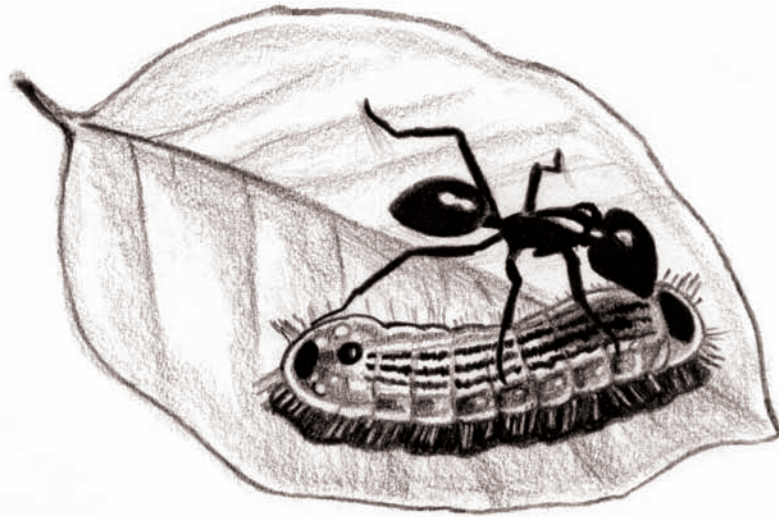
There they were, the silent egg and the crazy Dutchman,

and the hookgun that linked them forever, framed, brilliantly

motionless as any Vermeer.



THE MYRMECOPHILY



DREAMCARD

Screaming Caterpillars

Q. *Are there really caterpillars that scream to protect themselves? If so what types? Can we hear the sound they make?*

A. While they do not exactly scream, some caterpillars have noise-making organs, and the sound they produce is used to call in troops of ants to protect them from predatory wasps. The noise has an average frequency of 1,877 hertz, which would be audible to human ears if it were not so very faint.

Some noisy butterfly larvae species belong to the Riodinid family and live in the tropical rain forests of the New World.

Members of the Lyciid family, which has a worldwide range, also make sounds, for similar purposes.

The caterpillars' sound-producing organs and their relationship with ants were first reported by Dr. Philip J. DeVries in research published in 1990.

There are actually two sets of organs. Just behind the head is a pair of grooved rods, and rows of projections resembling guitar picks protrude from the top of the head.

Dr. DeVries described the noise as being like the sound of a comb running over the edge of a table.

The caterpillars reward the ants with amino acid secretions that the ants feed on.

eat invasive #8



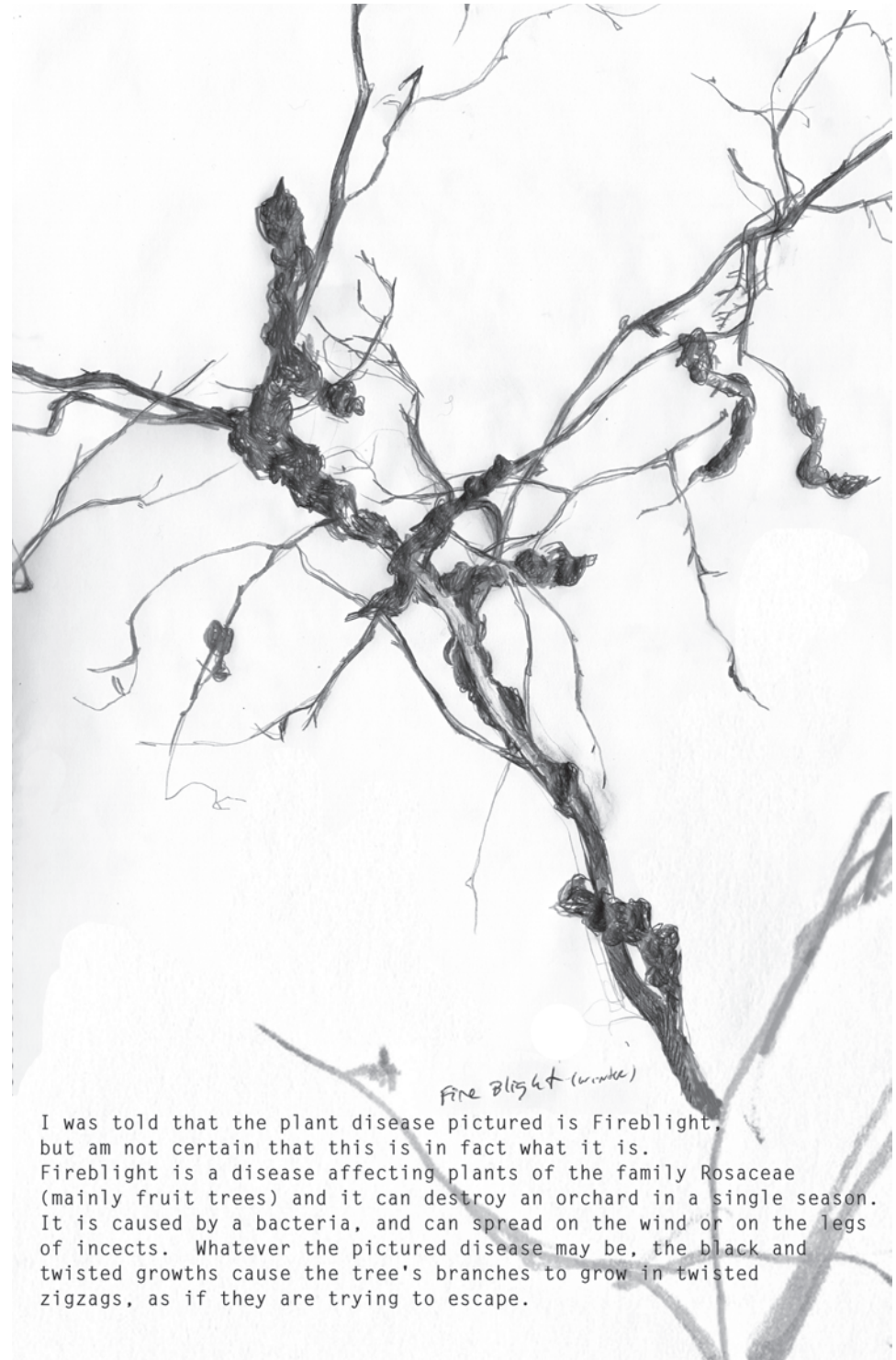
RED LIONFISH
(*PTEROIS VOLITANS*)

The lionfish are believed to have been accidentally introduced into Miami's Biscayne Bay during Hurricane Andrew in 1992, when an aquarium broke and released six fish. Since then, the species has overrun the Caribbean and South Atlantic waters, and is now invading the Gulf of Mexico. The lionfish prey on juvenile reef fish as well as local crab and shrimp populations, and pose a serious risk to the coral reef ecosystem. The species is considered one of the top 15 threats to global biodiversity today.

LIONFISH POPPERS RECIPE:

Fillet lionfish and cut into bite-sized pieces. In a bowl, beat some eggs and spices together until just mixed. Toss lionfish into bowl, and then bread the fish. Fry until golden brown and serve with a marinara dipping sauce.

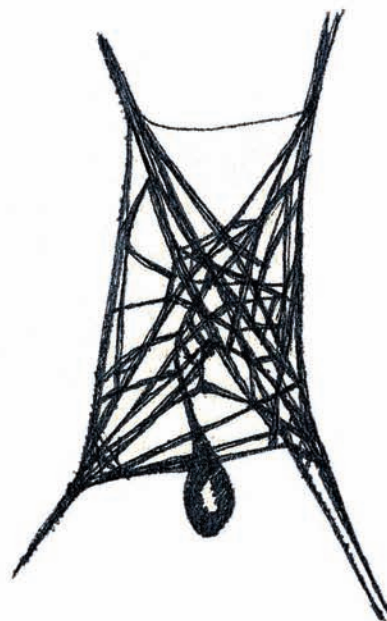
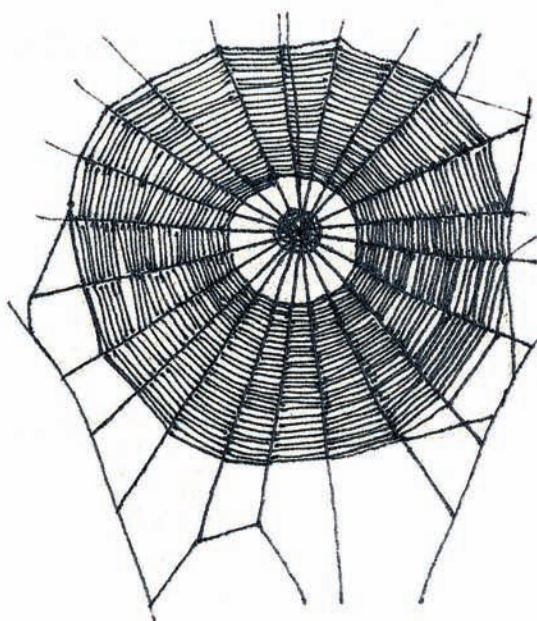
NOTE: Lionfish have poisonous spines in some of their fins and should be handled with care. Cooking the fish denatures the venom, or the fins can be removed.



Fire blight (winter)

I was told that the plant disease pictured is Fireblight, but am not certain that this is in fact what it is. Fireblight is a disease affecting plants of the family Rosaceae (mainly fruit trees) and it can destroy an orchard in a single season. It is caused by a bacteria, and can spread on the wind or on the legs of insects. Whatever the pictured disease may be, the black and twisted growths cause the tree's branches to grow in twisted zigzags, as if they are trying to escape.

THE ICHNEUMON WASP & ORB WEAVING SPIDER



DREAMCARD

Wasp Invades a Spider 21 and Puts It to Work

There are few things more creepy than alien possession, the notion of one creature taking over another's body and bending it to different purposes. Though this may happen every day on other planets, an egregious example has come to light on earth too, and as close to home as the forests of Costa Rica.

Here lives an orb-weaving spider, so called because of the perfect roundness of the web it industriously rebuilds every day. A serious hazard of the spider's busy life is that it is hunted by an ichneumon, or parasitic wasp. If the wasp's attack is successful, it temporarily paralyzes the spider and lays an egg on the tip of its abdomen, where it is out of reach. For two weeks the spider spins its web and catches insects every day as if nothing were amiss, except for the growing larva that clings to its belly and sucks the juices that drip through small punctures it makes in the spider's body wall.

So far this is just the usual grim script of parasitism. But then comes a strange twist. The night before the wasp larva kills its host, it somehow induces the spider to build a most unusual web.

Instead of its delicate orb, the zombified spider constructs two stout silk cables with thick cross-braces in between. This durable platform stands up to wind and rain better than the spider's ephemeral web. The wasp larva then kills the spider, and spins its cocoon on the platform constructed for it, safe from the ants that patrol the ground below.

Dr. William G. Eberhard, the spider expert at the University of Costa Rica who first noticed the bizarre phenomenon, says the wasp larva manipulates a particular subroutine in the spider's web-building program. The subroutine, an early part of constructing the web's frame, usually has five steps. Under the larva's direction, the spider just performs the first two steps over and over again.

This reprogramming of the spider's routine is presumably achieved by some chemical the wasp larva injects into its host. Dr. Eberhard has found that if he removes the larva from the spider on the final evening, the spider will build a platform-style web that night and the following night, but will revert to making its usual orb thereafter, as if recovering from some strong drug.

He has no idea what the chemical might be, but hopes first to identify what gland in the larva may be secreting it. The wasp's behavior is described by Dr. Eberhard in a report in last week's *Nature*.

Dr. Jay Rosenheim, an expert on parasitic wasps at the University of California at Davis, said many parasites were known to shape their host's behavior in various ways. "But what is really amazing and wonderful about this example is that the host's behavior is manipulated in such a detailed way," he said.

As another example he cited the case of a wasp, *Cotesia glomerata*, that parasitizes the large white butterfly. When the larvae emerge from the caterpillar, they spin their cocoons right next to it, and the stricken insect then stands guard by weaving a web over the cocoons and threatening attackers, behavior that is presumably induced by the larvae.

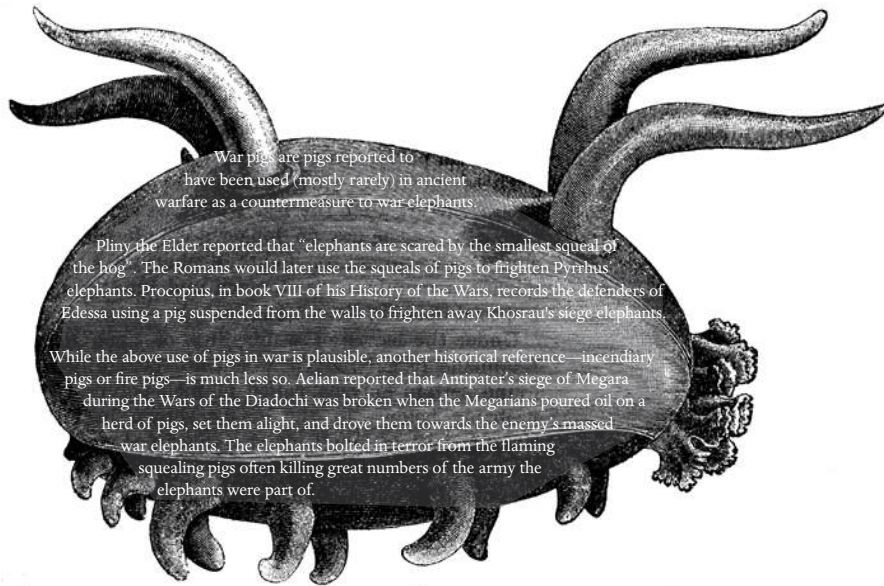
The Costa Rican wasp discovered by Dr. Eberhard preys on an orb-weaver called *Plesiometa argyra*. The wasp, a new species, is awaiting a name from Dr. Ian Gauld, a wasp taxonomist at the Natural History Museum in London.

Dr. Gauld said this was the first time he had seen a wasp with the ability to manipulate its host's behavior in such a way, and that nothing was known about how the manipulation was accomplished.

"I think biology is one of the last great frontiers," he said. "We have got no idea about what there is on earth with us, let alone what it is doing or how it does it."

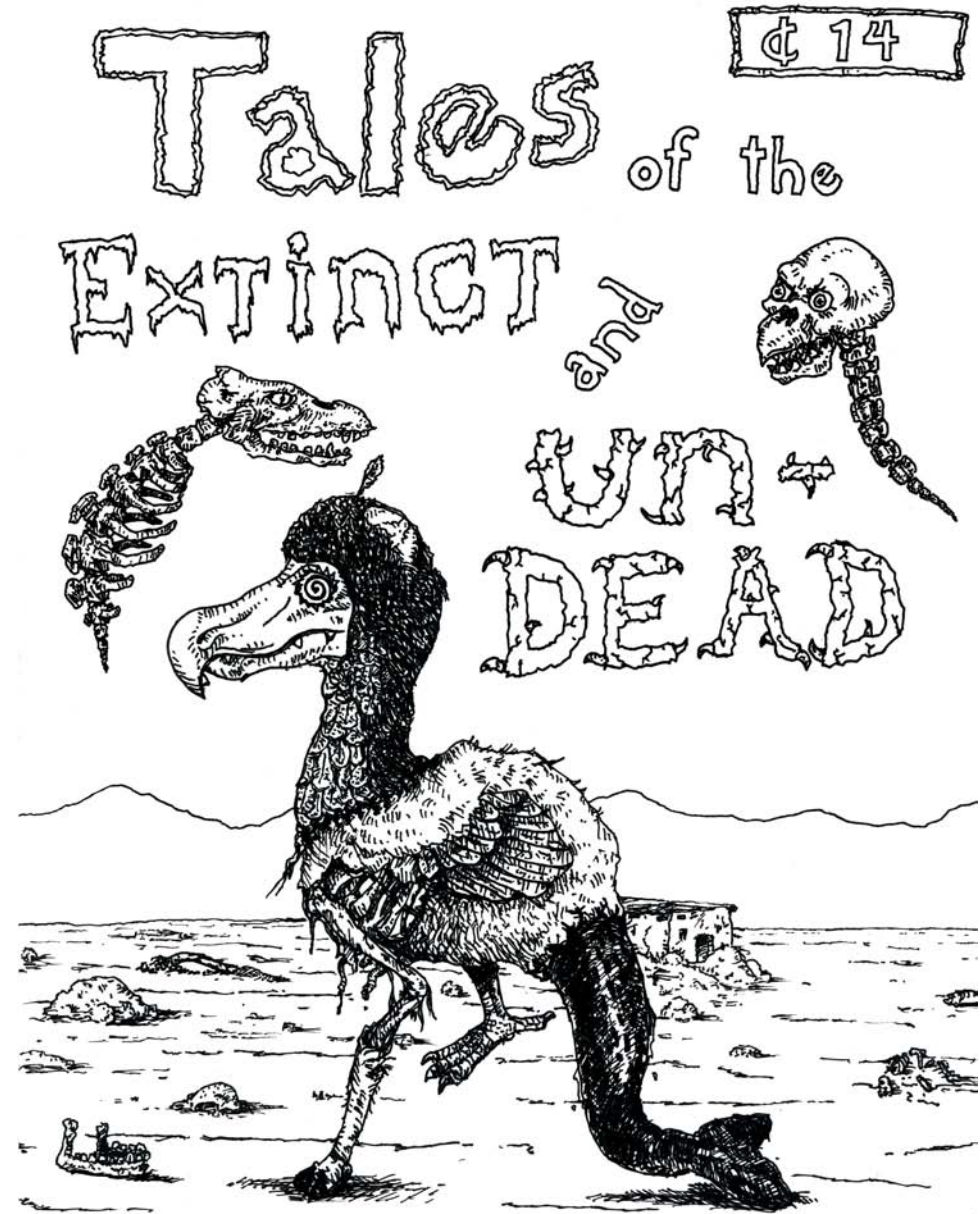
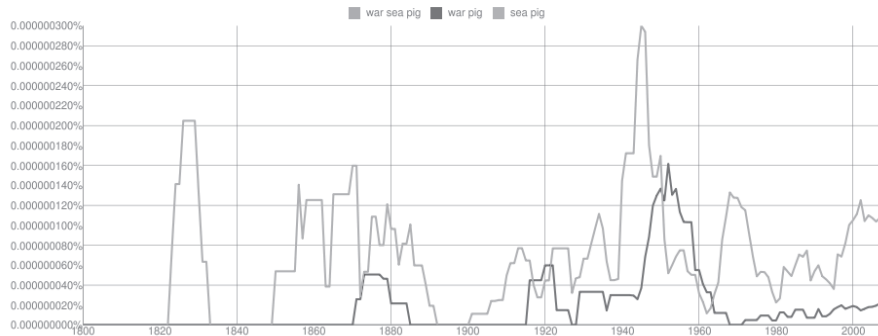


22nd Century War (Sea) Pig



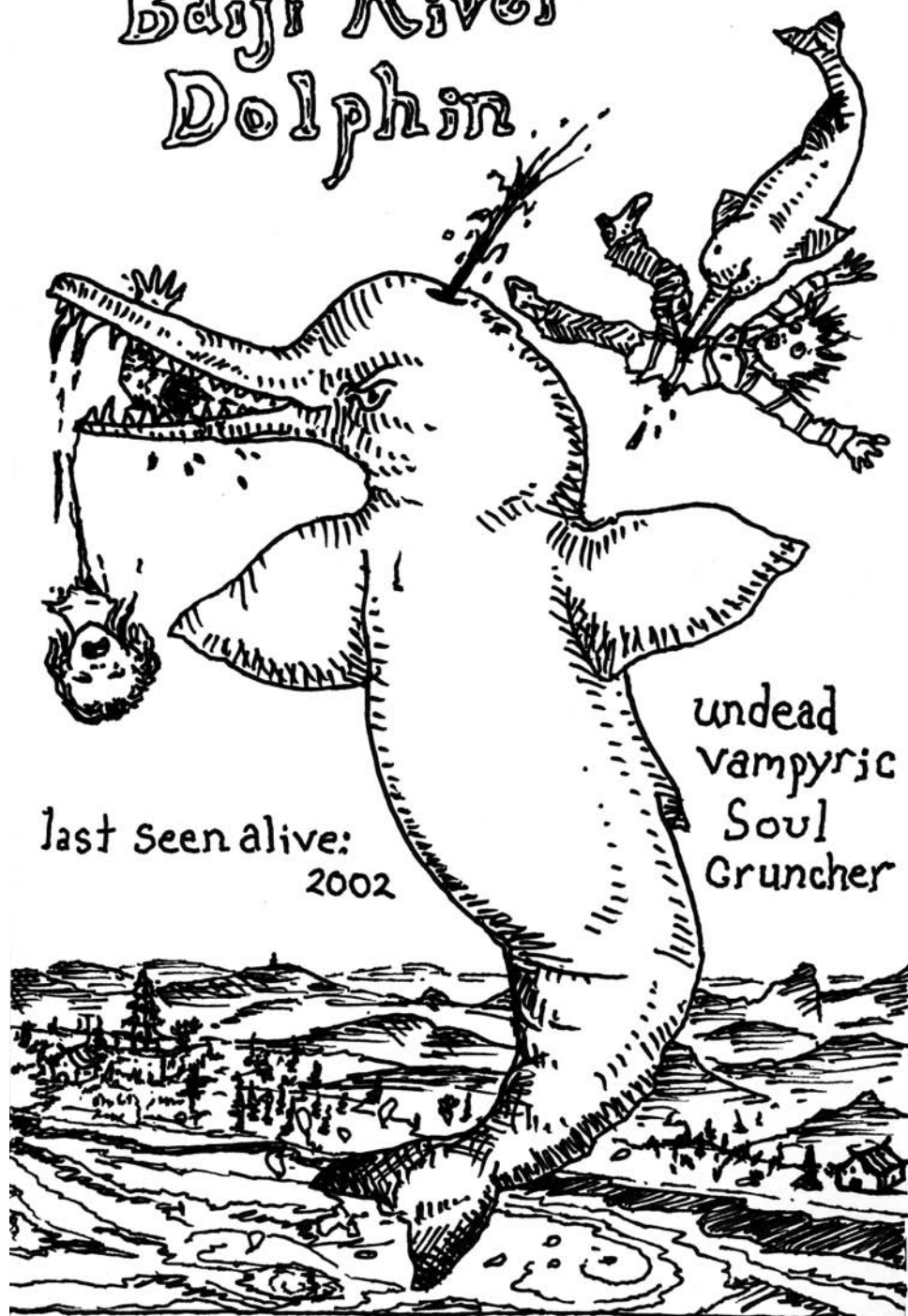
Google labs Books Ngram Viewer

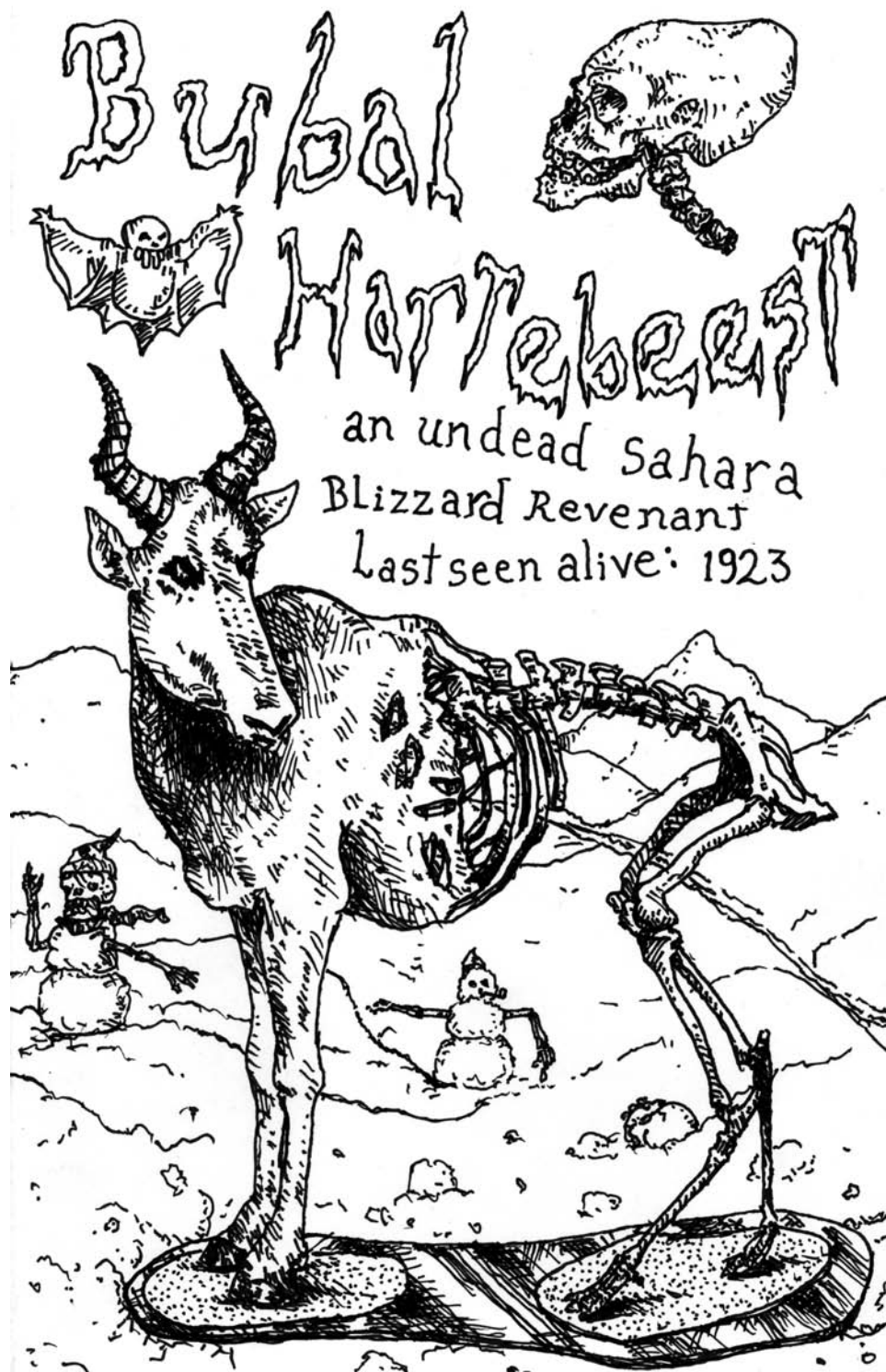
Graph these case-sensitive comma-separated phrases: war sea pig,war pig,sea pig
between 1800 and 2008 from the corpus English with smoothing of 3





Baiji River Dolphin





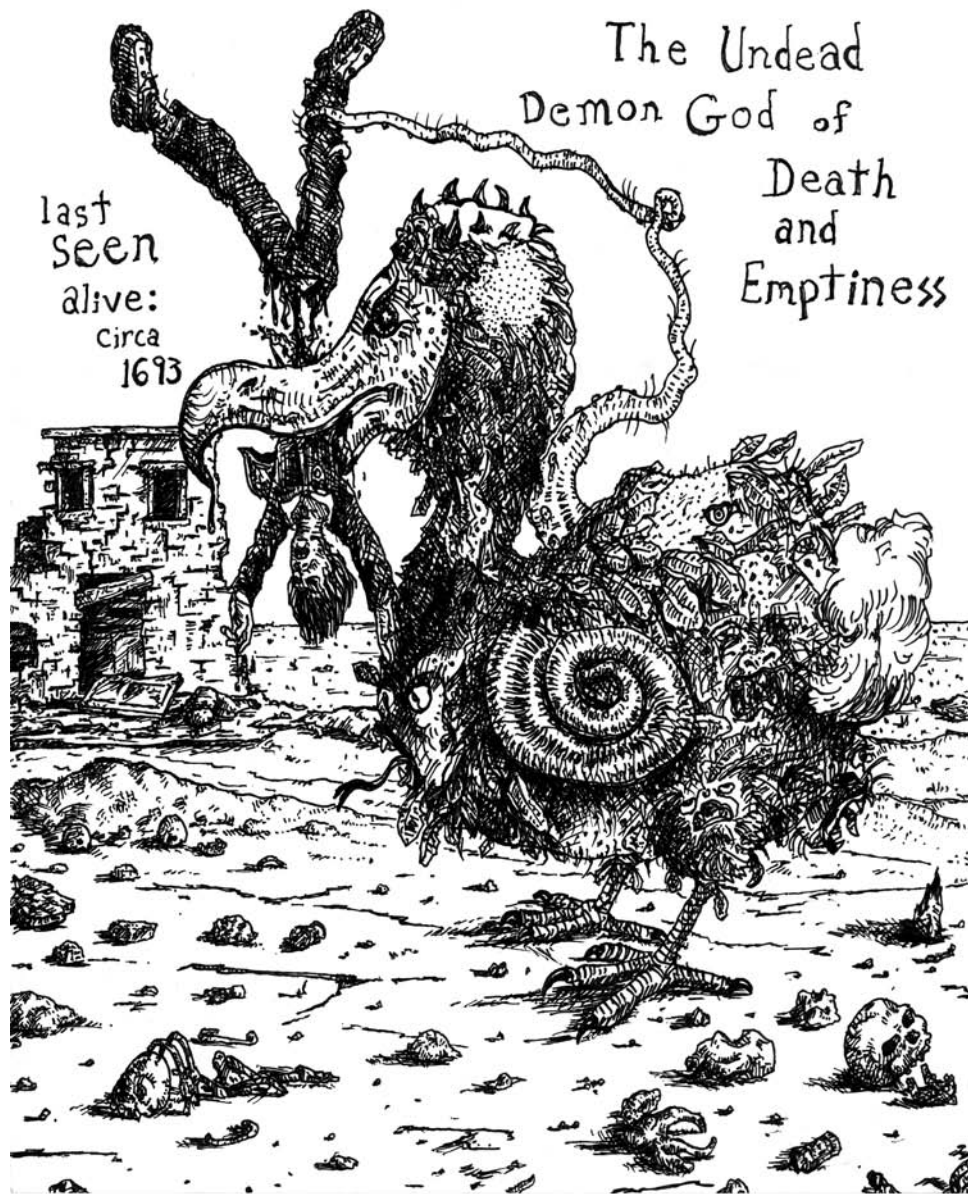
Thylacine

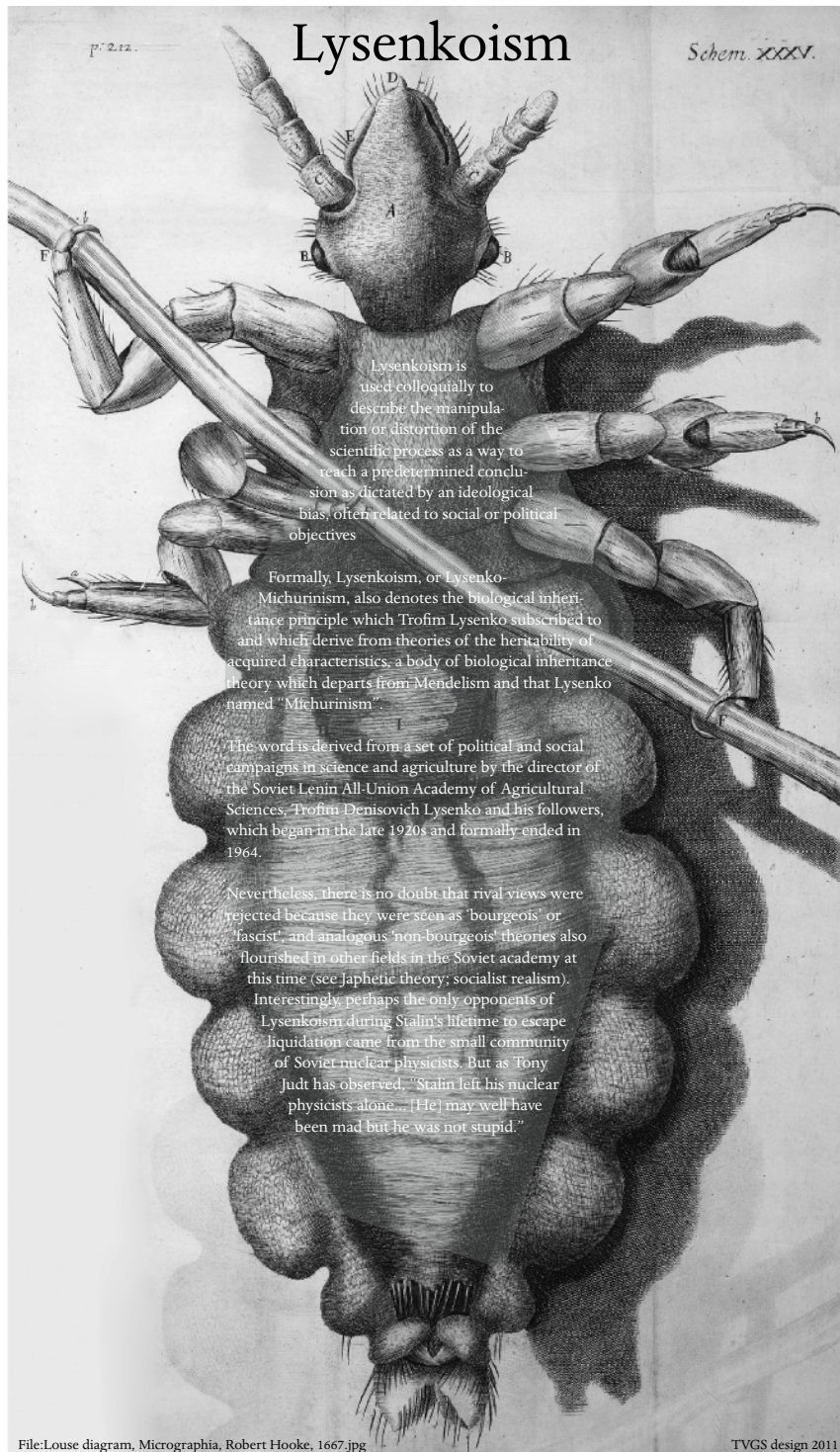


THE DODDO

The Undead
Demon God of
Death
and
Emptiness

last
seen
alive:
Circa
1693





eat invasive #3

EUROPEAN STARLING (STURNUS VULGARIS)

The European starling was introduced to North America by Eugene Schieffelin in 1890, who released 60 birds in Central Park, New York City, purportedly in an attempt to populate the U.S. with all the species of birds mentioned in Shakespeare. The current population of starlings residing in the United States is estimated to be 200 million birds. They are responsible for the decline of native birds, particularly cavity nesting species such as bluebirds and purple martins, and have caused millions of dollars of damage to crops. Coincidentally, starlings are on the decline in Europe, and are on the protected species list.



STARLING PIE RECIPE:

Steep 24 birds in cold water with a little vinegar. Drain and rinse. Put into a pot large enough to be able to barely cover with water. Season lightly with mace, lemon zest and its juice and a dash of sugar. Simmer until tender replacing the lost liquid with dry red wine or claret. Make pastry for a large double crust pie. A glass cake dish is good.

Remove and bone the birds, keep the liquid and put into a deep oven casserole lined with pastry. Make a mealy roux, blend it into the liquid until thickened, season with salt and pepper to taste, add a pinch of grated nutmeg and pour over the meat. Cover with pastry, seal the edges, score the top and bake in a hot oven (400°F) for 10 minutes, reduce heat (350°F) and bake for 45 minutes or until evenly browned.

THE BENZOQUINONES



DREAMCARD

For Monkeys, a Millipede a Day Keeps Mosquitoes Away

Upcoming titles from that little-known publishing house, Capuchin Press: "Don't Swat the Small Stuff," "Who Moved My Millipede?" and "Bananas from Heaven: A True Story of Monkeys, Mosquitoes and Miracles."

Researchers studying a group of wedge-capped capuchin monkeys that live in tropical forests of central Venezuela have discovered that the monkeys protect themselves against the annual merciless onslaught of mosquitoes exactly as humans do: by rubbing themselves with mosquito repellent.

But while humans may reach desperately for spritzers or bottles or laughably overhyped "protective" skin-so-softeners, the capuchins have learned to poke around in tree bark or termite mounds to extract a wriggling specimen of *Orthoporus dorsovittatus*, a millipede rich with powerful defensive chemicals called benzoquinones.

The triumphant monkey will then proceed to anoint itself head to foot with the repellent secretions by massaging the four-inch-long millipede into its fur.

And just as the benzoquinones discourage virtually all insects from harassing the millipedes, so the transferred chemicals appear to protect capuchins against the mosquitoes that otherwise would descend on them during the rainy season in sopranic clouds of misery.

The new work offers the most persuasive evidence yet that nonhuman primates are industrious chemical prospectors, putting organic materials to good medicinal use. Other researchers have suggested that primates use plant products as antibiotics, analgesics, even hallucinogenics.

But because most of the plant materials that primates have been observed to dabble with are chemically complex, composed of hundreds if not thousands of compounds, it has been difficult for scientists to demonstrate that the animals were seeking a specific ingredient from any given sample.

In the new study, the researchers were able to demonstrate that the millipede secretion consists of only two chemicals, both in the benzoquinone family and both known to be

potent insect repellents.

Moreover, they demonstrated that the use of millipedes for fur anointment corresponds closely with the annual peak in mosquito populations. "We think this is the clearest case yet" of an animal's using organic material for medicinal purposes, said Ximena Valderrama of Columbia University. "We're fortunate that the chemical analysis leaves very little room for doubt."

Ms. Valderrama, a graduate student in anthropology, is the principal author of the new report, which appears in the December issue of the journal *Chemical Ecology*.

Her co-authors are Dr. John G. Robinson of the Wildlife Conservation Society, located at the Bronx Zoo, and Dr. Thomas Eisner and Dr. Athula B. Attygalle of Cornell, who performed the chemical analysis of the secretions.

Nicknamed the "chimpanzees" of the New World for their high intelligence, capuchins are the famed organ-grinder monkeys, their fur a mottled grayish brown, their faces expressive and distinctively marked. They live in forests throughout Central and South America, congregating in hierarchically structured groups of maybe 25 to 35 individuals.

Dr. Robinson first observed the odd millipede massage behavior when he began studying a capuchin group at the Fundo Pecuario Masaguaral reserve in Venezuela in 1977, but it was not until Ms. Valderrama devoted herself to studying it full time that the precise nature of the ritual became clear.

As it happens, the monkeys have a real need of insect repellent.

Beyond the obvious annoyance factor, mosquitoes also serve as vectors of the parasitic bot fly, delivering fly eggs beneath a monkey's skin that then form debilitating, festering cysts in which maggots develop until they are mature enough to burst free.

Given the bot fly risk, it seems, the capuchins are willing to take risks of their own: the benzoquinones that they apply to their fur, Dr. Eisner

said, are many times stronger and more toxic than the most powerful "deep woods" mosquito repellent the United States Army can supply. Nevertheless, a capuchin will often pop a millipede into its mouth before anointment, presumably to help release the secretions.

When Dr. Eisner tried the same feat, Ms. Valderrama said, "He immediately fell to his knees, it was so painful and irritating." Yet, while a monkey may drool and its eyes glaze over from the millipede mousing, it sets to work anointing itself forthwith.

In addition to its medicinal value, millipede rubbing also serves as a social lubricant. The monkeys engage in rubdowns practically en masse, passing a single millipede from one to another.

"You'll see one or more monkeys looking frenzied and agitated, their bodies contorted as they're patting themselves all over," said Ms. Valderrama.

And should a monkey insist on bogarting its millipede, the other monkey simply rubs its body against the anointed one's fur to pick up some stray secretions.

Of interest to the researchers is the egalitarian nature of the millipede ritual. Whereas the monkeys normally hew to strict hierarchies when it comes to who gets the best food and who grooms whom, there are no obvious top or rotten bananas in the sharing of millipede secretions.

The researchers have yet to demonstrate that the use of millipedes prevents bot fly infestation among monkey participants. They also do not yet know if the use of insect repellent is common among capuchins, or is limited to the intensively studied group at the Venezuelan reserve.

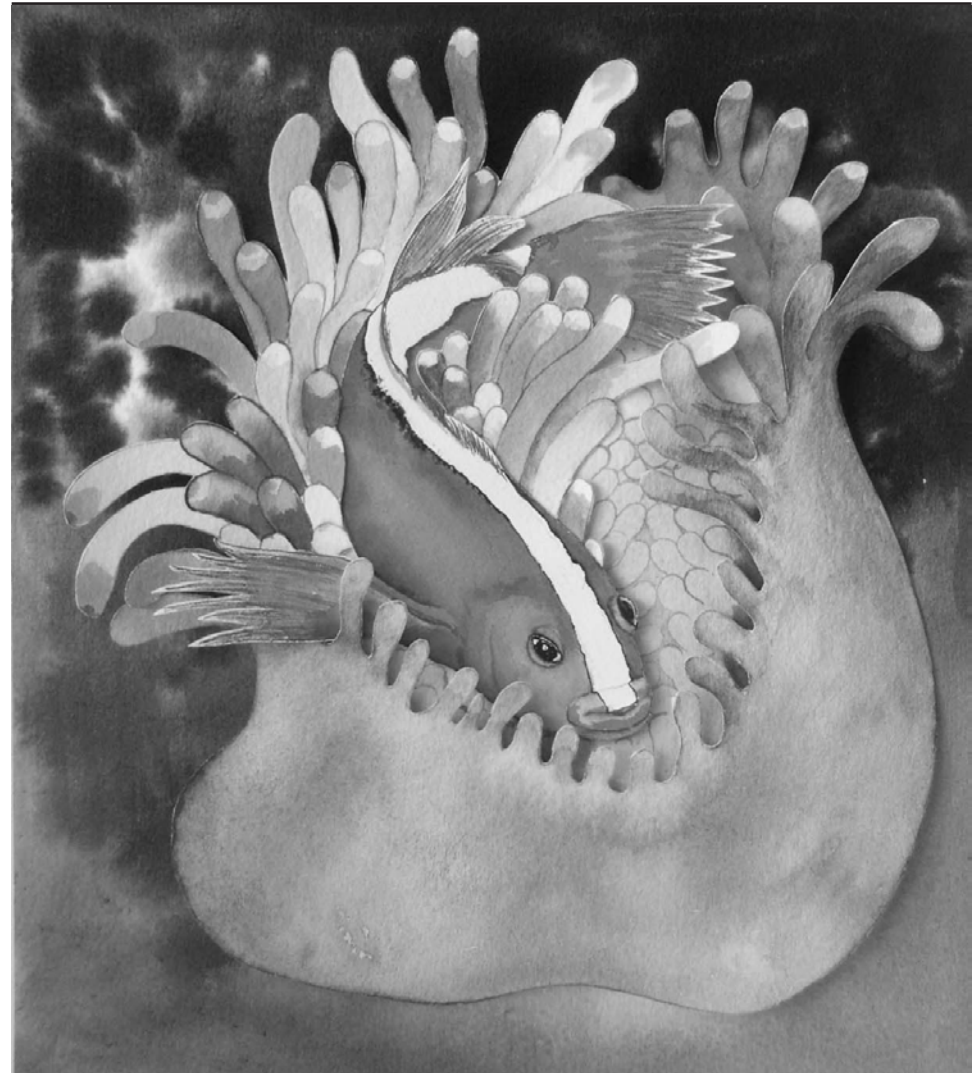
There, at least, the custom is entrenched, and for all the demonstrated carcinogenicity of benzoquinone, the capuchins do not appear to have suffered long-term consequences from exposure to it, many of them living more than 30 years.

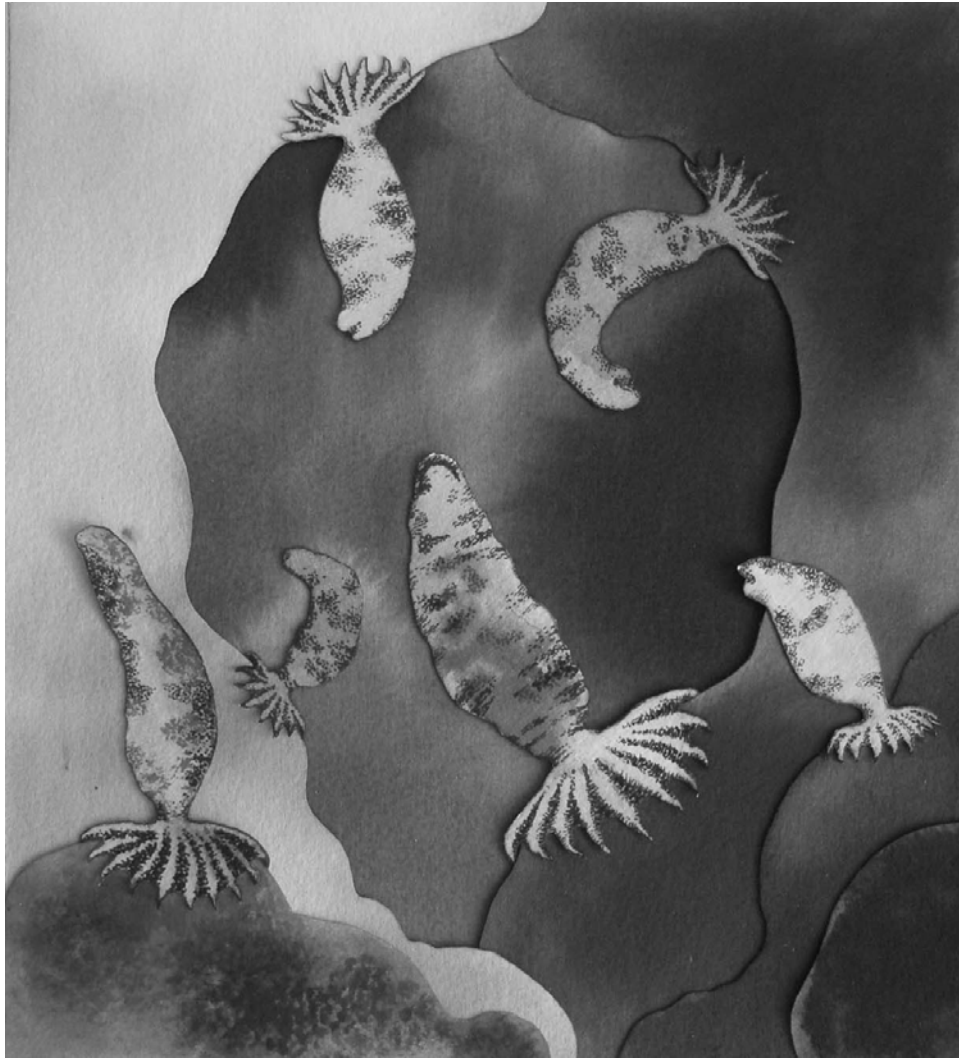
As the infant monkeys learn early on, the family that sprays together, stays together.



The **Antheraea frithi moth** is not a biological hermaphrodite but a non-reproductive pseudo-hermaphrodite. With one female and one male wing, it has a definite dividing line running along the moth's body with partial sets of male and female reproductive systems, neither part being functional.

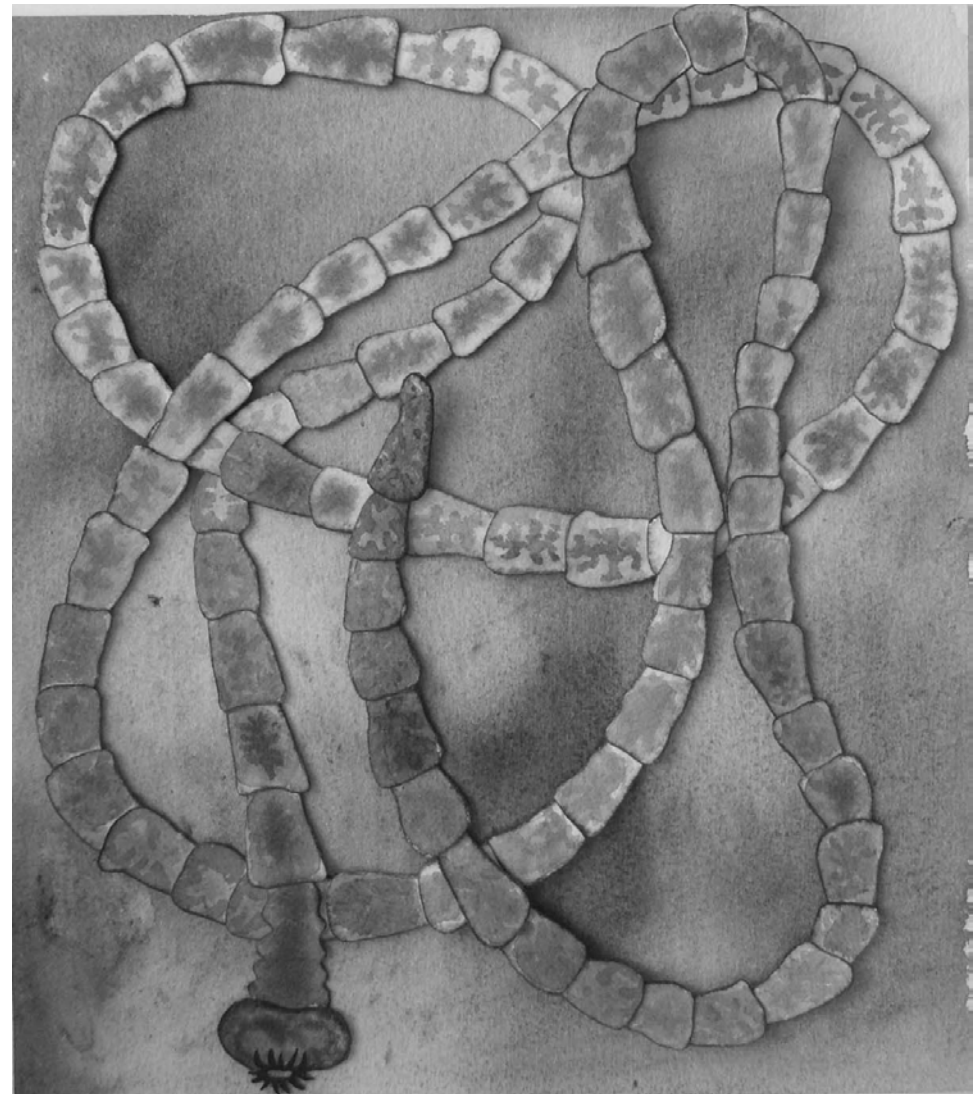
Clownfish or anemonefish are from the subfamily Amphiprioninae in the family Pomacentridae. The fish is a hermaphrodite and live in small groups inhabiting a single anemone which it protects and nurtures. When the large dominant female dies, the dominant male changes sex and becomes the female.





The salmon parasite, or **Gyrodactylus salaris**, is a small monogenean ectoparasite (about 0.5 mm long) which mainly lives on the skin of freshwater Atlantic salmon. All Gyrodactylus species give birth to fully developed individuals, which can also be pregnant. The "Gyro" species can self-procreate or procreate based on need.

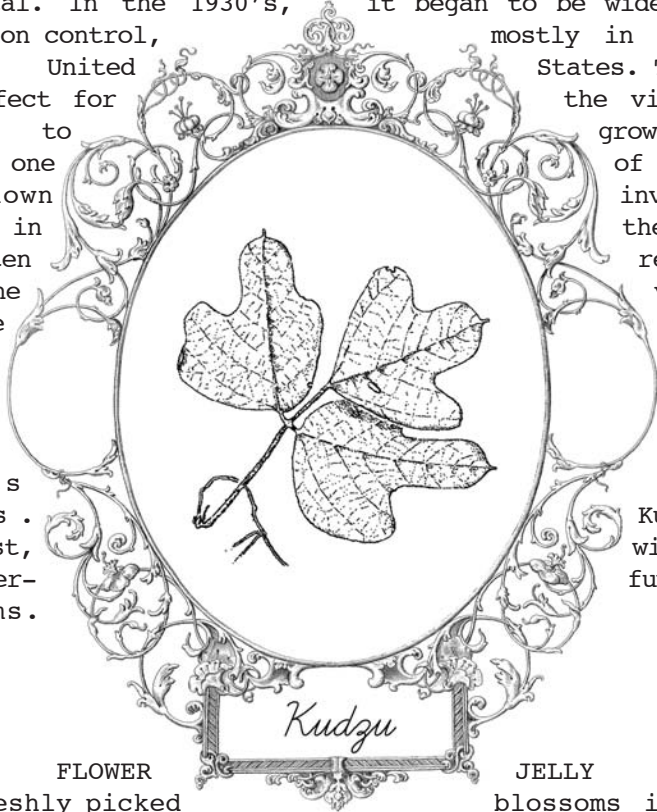
The **Tapeworm** (Proglottids) is composed of a colony of proglottids attached together to form the tapeworm. True tapeworms are exclusively hermaphrodites having both male and female reproductive systems in each proglottid, which can reproduce independently. Reproductive system includes one or many testes, cirrus, vas deferens and seminal vesicle as male organs, and a single lobed or unlobed ovary with the connecting oviduct and uterus as female organs. Mature proglottids are released from the tapeworm's posterior end and leave the host in feces.



eat invasive #2

KUDZU (PUERARIA LOBATA)

Kudzu was introduced from Japan into the United States in 1876 at the Philadelphia Centennial Exposition as a forage plant and an ornamental. In the 1930's, it began to be widely planted as erosion control, mostly in the south-eastern United States. The climate was perfect for the vine, allowing it to grow unimpeded. It is one of the most well-known invasive species in the US, and is often referred to as "the vine that ate the South." Growing over a foot a day in summer, kudzu can suffocate small forests in a few years. In August, it blooms with delicately perfumed purple blossoms.



KUDZU FLOWER JELLY RECIPE:
Wash freshly picked blossoms in a bowl. Pour boiling water over blossoms, stir, and let sit overnight. After they have soaked, strain the liquid into a pot. Add pectin according to package, and bring pot to a full rolling boil, stirring constantly. Allow to boil for 2 minutes. Skim foam. Then pour into sterilized jars and seal. Boil jars for an additional 10 minutes.

The growths on the stems of these plants look like seed pods, but in fact are caused by tiny insects. You can see the hole where the insect entered and exited in the larger drawing. I have observed these growths in both the midwest and on the east coast.





CONSTANT

JOURNEYMAN BIRD

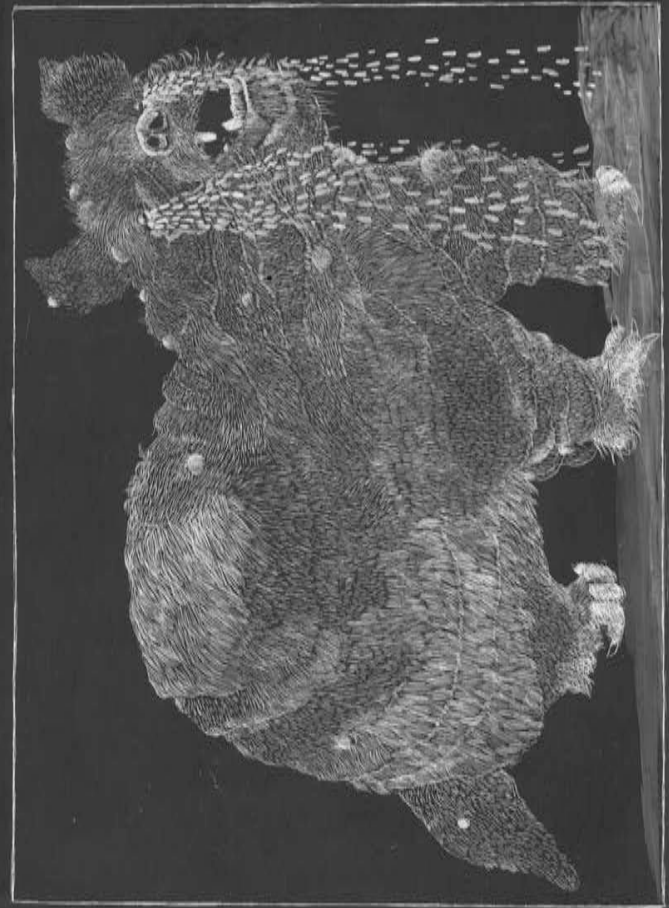
12.28.10 The habitat. Mining the moon for phases.
 12.29.10 Dissection and nomenclature. Finding evidence of time dilation in aves skeletal system. I don't think time travel is impossible. It's only impossible to actually experience it.
 12.29.10 Flight patterns and water tides. These specific events are definite examples of synchronicity. The risk isn't in making the past present, but in making the past a definite and stable history.
 12.30.2010 The narrative of one Journeyman's life cycle is constantly moving forward, along one or several lines. However each of these time lines are never straight. While following continuous paths they construct anything from twists to billows to spirals, often crossing one time line with another. So far it's impossible to measure time because of this structural nature.
 12.31.2010 The Journeyman displays a nostalgic nature that reverses the extinction of its familial narratives.
 1.01.2011 Close proximity of population allows for influence of phyxological narrative in a much larger global scale.

REVERSING EXTINCTION

The Squonk

(*Lacrimacorporus dissolvens*)
 "Hunters who are good at tracking are able to follow a squonk by its tear-stained trail, for the animal weeps constantly."
 "Squonk hunters are most successful on frosty moonlight nights, when tears are shed slowly and the animal dislikes moving about; it may then be heard weeping under the boughs of dark hemlock trees."

from The Book of Imaginary Beings
 by Jorge Luis Borges
 translated by
 Norman Thomas di Giovanni
 in collaboration with the author



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