CHEMBASE FOUNDATION

Wildlife Protection

Protecting life in the water, on the land and in the air

Our position · Why wildlife matters · Threats · Ecosystems, corridors and flyways

Chembase International Group Pty Ltd · ABN 98 660 823 316 · Level 2, Suite 65, 48 George Street, Parramatta NSW 2150

1 Our Position

At Chembase Foundation we believe in **protecting animals from being slaughtered**. Eating animals has largely been justified on the grounds of human health — a view that a growing number of healthcare professionals now question.

58 billion+ farm animals are killed for human consumption each year — and countless aquatic animals.

OUR STANCE

Chembase Foundation does not support the abuse of animals hunted by humans for their own pleasure and benefit.

2 Why Wildlife Matters

Wildlife conservation is the preservation and protection of animals, plants and their habitats. Wildlife provides balance and stability to nature's processes — conserving it means future generations can enjoy our natural world.

Value	What it means
Ecological balance	Stabilises nature's processes, keeps species from becoming extinct or in excess, and provides shelter for wild animals.
Food source	A critical source of protein and minerals. The UN FAO reports 34 million people rely on fishing for a living, providing protein to over 3 billion people.
Biotic function	Value created by how animals interact with the biosphere and geosphere — pollination, nutrient cycling and pest control.
Economic & social	Economic importance, nutritional value and socio-cultural significance — wildlife has long been tied to people for emotional and social reasons.
Existence value	The ethical value we place on wildlife simply existing.

3 Threats to Wildlife

AT A GLANCE — THE BIGGEST THREATS

- Illegal wildlife trade
- Habitat destruction
- Invasive species
- Pollution
- Climate change

4th

The illegal wildlife trade is the fourth-largest criminal industry in the world, after drugs, arms and human trafficking.

2 causes

Species become endangered mainly through loss of habitat and loss of genetic variation.

Habitat loss can happen naturally — dinosaurs lost theirs about 65 million years ago — but today logging, oil and gas drilling, over-grazing and development all drive habitat destruction.

4 How We Protect Wildlife

Scientists tell us the best way to protect endangered species is to **protect the special places where they live** — where they find food, shelter and raise their young.

AT A GLANCE — PROTECTION IN FOUR POINTS

1. **Survey wildlife — especially numbers and growth**
2. **Protect habitat by protecting forests**
3. **Define the areas of natural habitat**
4. **Protect wildlife from pollution and natural hazards**

CHEMBASE FOUNDATION — WILDLIFE PROTECTION

4 Five Steps to Prevent Animal Extinction

1

Buy eco-friendly products

2

Follow the 3-R rule — recycle, reuse, reduce

3

Don’t buy souvenirs made from endangered species

4

Eat less meat

5

Spread awareness — get involved

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5 Understanding Ecosystems — Phenology

Birds migrate, mammals hibernate, flowers bloom and leaves change colour. **Phenology** is the study of how the natural world times these events. Species take their cues from the local climate — temperature, precipitation and sunlight — to decide when to breed or flower.

Climate change is slowly raising average temperatures and **disrupting that timing**: plants bloom earlier and migratory birds return sooner. Because one species' timing can be vital to another's survival, phenology helps conservationists understand species patterns and overall ecosystem health.

5 Food Webs and Bioaccumulation

The energy in food traces back to the sun. Plants turn light into sugars through photosynthesis, and energy moves through the ecosystem as predators eat prey.

A food web shows how producers, consumers and decomposers interact and transfer energy.

Predators also absorb the chemicals inside their prey. Human pollution — heavy metals, oil, and industrial and pharmaceutical chemicals — builds up in plants and fish, then in the animals that eat them. This is **bioaccumulation**, and it can devastate food webs and kill species.

HOW TOXINS BUILD UP — MORE CONCENTRATED AT EACH STEP UP THE WEB

Pollution
Heavy metals, oil, industrial and pharmaceutical chemicals

→

Plants and fish
Absorb the chemicals

→

Animals that eat them
Toxins concentrate further

5 Natural and Human Disturbances

NATURAL DISTURBANCE

Ecosystems bounce back

Fires, floods, earthquakes, disease and drought disrupt ecosystems. Healthy ecosystems can bounce back — some even depend on disturbance — returning to their former state or making room for new species.

HUMAN DISTURBANCE

Constant pressure

Clear-cutting, habitat fragmentation and pollution put **constant pressure** on ecosystems. As soon as an ecosystem adjusts to one stress another appears, and the natural cycle of growth, dieback and growth cannot function properly.

6 Corridors & Flyways

Wild animals are always on the move in search of food, mates, shelter and water. Species with large territories — migratory birds, wolves, mountain lions, butterflies — are threatened as roads, fences and buildings cut off habitat.

A **wildlife corridor** is a tract of land that connects habitats — such as refuges, parks or rivers — that development would otherwise separate.

AT A GLANCE — WHAT CORRIDORS DELIVER

- Better access to food, water, shelter and places to raise young
- Room for large-territory species to reach new habitat
- Larger, more viable gene pools and biodiversity
- Safe long-distance movement away from roads and cars
- More undisturbed areas, so species survive disturbances

6 Corridors & Flyways

CASE STUDY — WALLIS ANNENBERG WILDLIFE CROSSING, CALIFORNIA

The National Wildlife Federation, with the Santa Monica Mountains Fund, is building a crossing over the US-101 freeway at Liberty Canyon for mountain lions and other wildlife. It will be **the largest wildlife crossing in the world**, with completion expected in late 2026.

Birds and butterflies face different challenges: the key rest stops along the way matter too. **Flyways** are the predictable routes migratory birds and insects use between winter feeding grounds and summer breeding grounds, usually along coastlines, major rivers and mountains.

THE FOUR MAIN MIGRATORY FLYWAYS OF THE US

Flyway	Route
Pacific	Along the Pacific coast, west of the Rocky Mountains
Central	Over the Great Plains, east of the Rocky Mountains
Mississippi	Along the Mississippi River
Atlantic	Along the Atlantic coast

WILDLIFE PROTECTION

Every habitat, every species

01

In the water and the air

02

On the land and in our habitats

03

The small creatures

01 · WILDLIFE PROTECTION

In the water and the air

02

Every species matters

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Great animals of the land

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The colour of the wild

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Protecting the habitats they need

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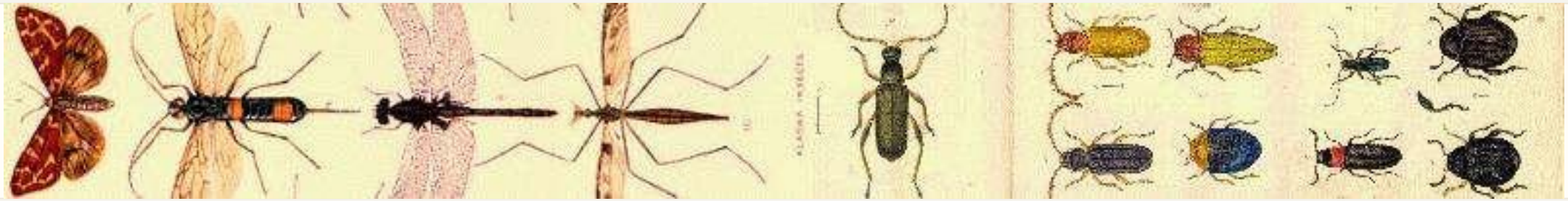
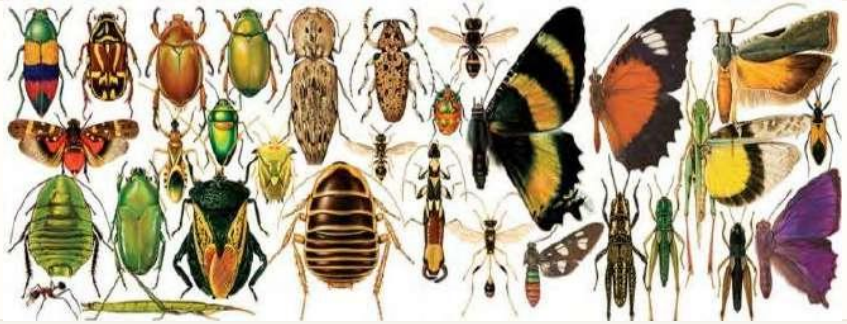
Small creatures, big role





04 · WILDLIFE PROTECTION

The diversity of insect life

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It costs you nothing to find out how much you can save

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