

Wisconsin Wildlife *Fast Facts*

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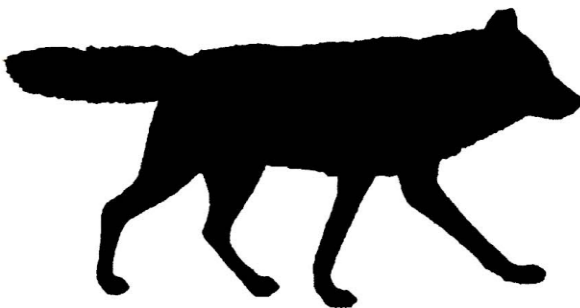
"Of all the wild creatures of North America, none are more despicable than wolves. There is no depth of meanness, treachery or cruelty to which they will not cheerfully descend."

William T. Hornaday, Zoologist & Conservationist
1927, *The American Natural History*

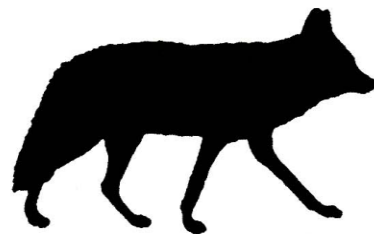
No animals are more universally cherished than our dog companions. Their domestication was inevitable. It was made possible by their highly social behavior, their adaptability to new foods and conditions, and their inquisitive and approachable nature. Regardless of the unnatural selection (genetic engineering) that we have imposed on them over time.... our dogs have accompanied us to this day as willing members of their adoptive human packs. We regard and treat them as extended members of our own family.

But then there are those dogs who have never known the bonds and constraints of human society. They are the ones who roam at large on the fringes and beyond the borders of our civilized landscapes. They are the dogs we cannot control, and it is for this reason that we admire and fear them the most. Our degree of tolerance (or intolerance) towards them is likely an expression of the extent of our relationship with them. If our intent is to seek a state of tolerance for animals which occasionally compete with our own interests, then perhaps a better understanding of their past and present role in nature (and society) is in order....

Wolf and Coyote – The Big Dogs of Wisconsin



Wolf



coyote



Coyote *Canis latrans*
(dog) (barking)

Synonyms:

Coyote is from Nahuatl (Aztek) basis for the Mexican-Spanish word coyotl .
Also brush wolf, prairie wolf, American jackal, mush-quo-de-ma-in-gon (Chippewa).

Description:

At first glance - a small, pale-gray or yellowish-brown German shepherd-like dog with a drooping, bushy tail; large, erect, pointed ears and long, slender and pointed muzzle. Feet look proportionately small for size of animal.

Fur is moderately long with harsh or coarse black-tipped guard hairs.

Length: 44-52" Weight: 25-42 lbs. (Record of 60" and 75 lbs)

Height at the shoulder 18-22".

Northern coyotes are the largest.

Molts (sheds) once annually - beginning in June (WI) with full coat in by October.

Range:

An exclusively Nearctic canid.

Nineteen recognized subspecies (16 in North America and 3 in Central America).

Panama in the south, north through Mexico, the United States and Canada.

Occurs as far north as Alaska and all but the northernmost portions of Canada.

Origin:

The ancestor of all modern canids originated in North America.

Approximately 40 MYA (Eocene epoch), the first clearly identifiable member of the dog family (Prohesperocyon) emerged in what is now southwest Texas.

Approximately 34 MYA (early Oligocene epoch) this initial stem stock radiated out into three major subfamilies: the Hesperocyoninae, and Borophaginae (both now extinct lineages) and the Caninae - whose descendants survive to this day.

By 28MYA twenty-five species of canids roamed western North America. This was the all-time continental zenith of canid diversity.

Approx. 7MYA Canids spread out of North America- first to Europe (via Beringia), then Asia and finally Africa.

During the late Pliocene (4MYA) the coyote (*Canis latrans*) emerged in tandem with the now extinct form (*Canis lepophagus*). Both forms were well established and widespread by the beginning of the Pleistocene. Their greater capacity for adaptability than the wolf may have resulted from the intense predatory pressure imposed by other prehistoric carnivores of the time.

The eastern coyote appears to be a recent descendent of predominantly coyote ancestors with some additional genetic contribution (introgression) of wolf (*Canis lupus*) and possibly dog (*Canis familiaris*) genes. Also referred to as the Tweed wolf, it is now considered by most authorities to be a hybrid of the western coyote and eastern wolf (*Canis lycaon*-proposed).

Coyotes disappeared from eastern North America near the end of the last glacial period (12,000 YA).

The red wolf (*Canis rufus*) was the only mid-sized ("coyote-like") canid in the east until the 1920's when, with the clearing of forests and elimination of wolves, a new open niche was created and filled by coyotes arriving from the west.

Compiler comment: The ancestral legacy of the coyote has yet to be conclusively determined. Recent developing genetic technologies will inevitably contribute towards the completion of the genealogical record for coyotes (and wolves) in the foreseeable future.

Wisconsin Status:

Widely distributed and locally common statewide.

Perhaps 20,000 to 25,000 animals in 2007.

Population density seldom exceeds average of 1 coyote/square mile (about same as bears in north).

WI History:

By 1900 the coyote was considered common statewide.

Coyote numbers increased in the north as wolf numbers declined (bounty).

In early Wisconsin, efforts to raise sheep were often abandoned because of coyotes.

Habitat:

Prefers forest edge and brushy areas.

Most common in mixed habitats. Less common in unbroken forests.

Second growth hardwoods after disturbance (cut or fire).

Dry marshes or prairies with interspersed thickets of brush or tall herbaceous growth.

Forest trails or tote roads.

In southern WI coyotes have been known to "hunt, eat, sleep, and even den in cultivated fields".

Behavior:

Primarily nocturnal, but was considered diurnal prior to European contact.
Some coyotes are diurnal- esp. in West around prairie dog (diurnal prey) colonies.
Sleeps by day in heavy vegetation.
Hunts primarily in pairs.
May travel in large (extended family) groups.
Usually travels along established or fixed trails (incl. fire lanes & logging roads).
Travels in a proverbial “dog trot” (short-bouncy) gate - occasionally gallops.
A typical pack consists of 6 closely related adults, yearlings and young.
Packs are typically smaller and less stable (hierarchy associations) than wolves.
Covers an average of 3-10 miles during a nightly foray (subject to habitat quality).
Communicates with high-pitched howls, yips, barks, yelps, facial expressions and body posture.
Also communicates passively with urine, feces, and glandular secretions, which are left as territorial markers during the denning season.
Most often heard at twilight or after dark.
Coyotes are usually intolerant of foxes and often initiate aggressive attacks towards them.

Home range:

Average of 3 mile radius from the den (dependent on food availability).
Wisconsin home range averages 5 to 10 square miles.
Boundaries are scent marked with urine.

Diet:

Primarily carnivorous (90% small mammals - esp. rabbits & rodents).
Also birds (3%), snakes, deer (esp. fawns & carrion), large insects, other invertebrates.
Plants include soft mast, other fruits, and succulent vegetables (esp. fall & winter)
Occasionally poultry (free-range), livestock (esp. sheep & calves), rubbish, manure (winter) and small pets.
Winter diet in northern WI: vegetation (5%), birds (4%), mammals (86%)
Winter mammals in diet - northern WI (% total volume): hares (6%), rodents (19%), deer (35%).
Winter diet in southern WI: vegetation (12%), poultry carrion (5%), mammals (83%)
Winter mammals in diet - southern WI (% total volume): mice (4%), rabbits (21%), livestock carrion (44%).
When hunting mice, coyote jumps, pounds w/front paws, noses prey & gobbles it down whole (like a fox).

Reproduction:

Most pairs are monogamous for a couple (to several) years.
Female is in estrus (heat) for 2-5 days (February in WI).
Gestation is 60-63 days.

One to 19 (average 6) light-brown-muzzled pups are born in April (WI).
Eyes are open and ears up at 10 days.
Pups emerge from the den at 21 to 28 days and are started on regurgitated meat at this time.
Pups are weaned at 35-42 days.

Den:

An “appropriated” or refurbished woodchuck, badger or fox den.
Some coyotes dig their own dens.
The female often prepares a second den before the pups are born as an alternate refuge.
The den may be in a large hollow log or beneath a slab or boulder.
The den is often associated with a mound or knoll.
The den entrance is usually 10” high X 12-14” wide and hidden by vegetation.
Established trails sometimes radiate out from the den site epicenter.
The same den may be occupied for many years.

Growth and maturity:

Male pups disperse from natal area at 6 – 9 months.
Female pups usually remain with parents & form the basis of the pack.
Full growth is attained between 9 and 12 months.
Sexually mature at 12 months.

Mortality and Survival:

50 – 70% of pups don’t survive to maturity.
Coyotes are rarely struck by automobiles.
Urban coyotes tend to live longer than their rural counterparts.

Parasites and Disease:

Several species of lice, mange (follicle) mites, ticks, fleas, flukes, tapeworms, roundworms, and thorny-headed worms.
Diseases include canine parvovirus, distemper, rabies, and tularemia.
Coyotes may have frequent occurrences of tumors and abscesses - particularly about the mouth.

Life Span and survival:

To 10 years in the wild. Report of 18 ½ years in captivity.
Average life span is 5-6 years.
Urban coyotes tend to live longer than their rural counterparts.

Special adaptations & limitations:

Sight, hearing and smell is exceptionally acute.
Runs to 43 MPH. Average running speed is 25mph.

When galloping endurance is not great (tires quickly).
Relies more on use of cover and stealth (quick turns & double-back) to elude enemies.
Leaps a span of over 13 feet.
Fairly good swimmer (dog-paddles).
Unlike wolves (but similar to dogs) coyotes have sweat glands on their paw pads. This trait is absent in New England coyotes - who are thought to be of mixed wolf ancestry (see origin & genetics issues).
Western coyotes occasionally appear to enter a cooperative hunting relationship (mutualism) with badgers on prairie dog towns.

Genetic Issues:

Coyotes can cross with domestic dogs and produce fertile offspring (coy-dogs).
Male coyotes seldom mate with female dogs.
Female coyotes occasionally mate with male dogs, but they are left to raise the pups by themselves.
Almost all dog/coyote cross pups die as juveniles.
The few who survive often become "nuisance animals" - which have the predatory nature of the coyote but also the dog's lack of timidity towards humans (see Mgmt. below).

Enemies:

Aside from humans (in WI), only the gray wolf appears to display a limited tolerance for coyotes in shared habitat.
In West, cougars sometimes kill coyotes.
A coyote being chased by a wolf, will lead its antagonist down slope and then abruptly jog and course back uphill - thus increasing the distance between it and its heavier, less-agile pursuer.

Management, Damage and abatement:

Wildlife Services (Federal Agency) destroys up to 100,000 coyotes annually in U.S.
Livestock depredations are directed primarily at sheep and calves.
Bounties have consistently proven to be expensive and ineffective.
Coyote predation on livestock is low in Wisconsin.
Reports of predation on small pets appear to be increasing in areas of rapid development.
Coyotes are taken in #1 $\frac{3}{4}$, #3, #3N or #4 traps with short chains (if staked).
Favorite lures include commercial, coyote urine, tainted meat, gland lures or skunk essence.
Best sets include dirt-hole, scent post, flat set or trail set (snow).

Human dimensions:

Coyote fur is used for coats (esp. men's coats) and trim.
Studies have confirmed that urban coyote populations are on the increase.

Perhaps 2000 individuals live in the “greater Chicago area” and this circumstance may well apply to many other urban landscapes in America.

Attacks on humans are rare, but when they occur, children less than 10 yrs. appear to be targeted (CA). Only one death recorded (CA toddler).



Gray Wolf *Canis lupus*

(dog) (wolf)

Synonyms:

Gray wolf, timber wolf, common wolf, deer wolf, black wolf, ma-in-gon (Chippewa), m' wha (Potawatomi), northern timber wolf, lobo, loafer or buffalo wolf (old West).

Description:

A large, gray German shepherd or malamute-like dog with broad head and muzzle.

Ears are less conspicuous than in coyote.

Coat may range from grizzled gray to all black or white.

Feet and claws are heavy. Front paw heel pad (adult) > 30mm in diameter.

Tracks are not easily distinguished from some large dog breeds.

Height: 28-33" at the shoulder.

Length: 5.0 – 6.5 feet from nose to tip of tail.

Weight: 55 – 108 lbs(WI). Record of 175 lbs. (AK).

WI males average. 75 lbs. WI females average 60 lbs.

Range:

A Holarctic animal- found (locally) worldwide in the northern hemisphere above 30' N. Latitude.

Status:

Wisconsin, Minnesota and Michigan unlisted and managed as a harvestable species.

Winter 2017/2018 Wisconsin (minimum) overwinter population estimate of 905-944 animals.

2007: 7,000 to 11,200 in Alaska , 5000 in lower 48 United States

- 546 in Wisconsin**
- 3,020 in Minnesota**
- 30 on Isle Royal N.P.**
- 509 in Michigan U.P.**
- 200,000 in 57 other countries (including Canada).**

Historical:

In the last 100 years 7 of the 24 recognized subspecies of gray wolves native to North America and three of the 12 recognized Eurasian subspecies have been eradicated. Prior to the Wisconsin settlement period (early 1830.s), wolves were considered to be widely distributed statewide, with an estimated population of 3,000 to 5,000 animals..

1865: A WI state bounty is enacted. \$20.00 for adult/ \$10.00 for pups.

With combined influence of bounty, decline of deer (principal prey), and clearing of forests, wolf population begins to decline.

1880's: Wolf is considered exterminated from southern Wisconsin.

1914: Wolf is considered exterminated from central Wisconsin.

1930's: Less than a dozen counties (all north) still have wolves.

1930: Statewide population estimate of 150 wolves.

1950: Statewide population estimate of 50 wolves.

1957: Last of packs are gone. State bounty is rescinded.

1958 & 1959: Last two wolves killed (on record) in WI

1960: The wolf is considered extirpated in Wisconsin. Michigan rescinds its bounty.

1965: Minnesota rescinds its bounty.

1974-75: An active pack is discovered on the MN/WI border (south of Duluth).

1975: Wolf is listed as WI State Endangered. Recovery goal is 80 animals.

1980: Five packs are known in state (4 in Douglas Co. and 1 in Lincoln Co.).

1989: State recovery plan passed, state downlisting goal 80 wolves for 3 or > years.

1995: Downlisting goal (without reintroductions) is achieved (83 wolves).

1997: WI state population estimate exceeds 140 animals.

1999: New wolf plan is approved. Wolves are downlisted from Endangered to threatened on state list.

2003: Wolf is downlisted to Federal Threatened list in WI. & other portions of NE U.S.

2004: Wolf is removed from State List of Endangered & Threatened Species.

April 2005: Fed issues WI permit to conduct limited control for depredations.

Sept. 2005: Due to lawsuit, Fed rescinds WI permit to conduct limited controls.

2006: Feds designate a Western Great Lakes Distinct Population Segment (WGLDPS) region for management purposes.

April 2006: Fed reissues WI permit to conduct limited controls for depredations.

Aug. 2006: Due to lawsuit, Fed rescinds WI permit to conduct limited controls.

2007: Feds remove wolves from WI & WGLDPS from Endangered and Threatened list.

All wolf management authority is returned to states in the WGLDPS region.

09/29/2008: Due to lawsuit, Western Great Lakes population is relisted as Federally Endangered. Federal Govt. rescinds state management authority in the WGLDPS.
01/07/2012: Federal Govt. delists WGLDPS as a federally-protected species. Authority to manage is returned to States.

Origin: (See coyote Origin for additional information on general canid ancestry.)

Most research suggests that several wolf-like canids diverged from a common ancestor approx. two to three million years ago in Asia. The species *Canis lupus* appears to have emerged in Eurasia approx. one million years ago.

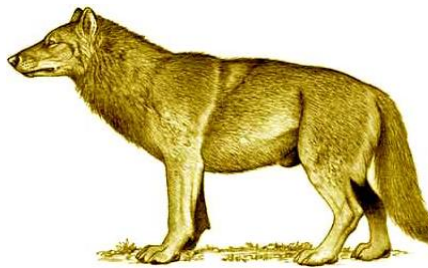
During this time glaciations (and subsequent low sea levels) would allow complex continental exchanges of highly-mobile animals. The ancestors of modern gray wolves emigrated from Eurasia to North America via the mammoth steppes of Beringia approx. 750,000 years ago.

Recent genetic studies have demonstrated that the red wolf (*C. rufus*), & eastern gray wolf (*C. lycaon*) have a distinct North American lineage (like the coyote).

Both animals appear to have diverged from coyote ancestors during the early Pleistocene (~300,000 years ago).

Approx. 100,000 years prior to the arrival of Eurasian immigrant gray wolves, the Dire wolf, *Canis dirus*, a similar sized - but more robust species had already evolved and established itself across North and Central America. Described as a “gray wolf on steroids”, it had a more massive frame, shorter legs, larger skull and teeth, stronger (bone-crushing) jaws– but smaller brain case. (If there was a canine equivalent to the extinct human species *Homo neanderthalensis* – this was it!) It was especially abundant in northern South America, where its primary prey was camelids (llamas, guanacos etc.).

The Dire wolf “coexisted” with the fleeter (and more adaptable) gray wolf for over 400,000 years until its extinction approx. 8000 years ago.



Dire wolf *Canis dirus*

Habitat:

Forested wild lands and heavily wooded cut-over land.
Uses trails, roads and borders (edge) for travel.

Home Range and territory:

A pack territory may range from 20 to 100 square miles.
May emigrate as far as 200 miles to escape harsh conditions.

Diet:

In WI a study in early 1980's revealed primarily deer(55%), beaver(16%), snowshoe hare(10%), rodents and other small mammals (19%).
Deer comprise to 80% of diet much of year but beaver become important spring & fall.
A wolf is estimated to consume approx. 18 deer per year.
Summer diet is more diverse & includes great variety of small mammals.
Moose in Minnesota.
Also woodchuck, muskrat, coyote, raccoon, large insects (esp. grasshoppers), hard & soft mast (nuts & berries), grasses.
Deer carrion probably figures high in both WI and MN.
Wild turkeys appear to be playing an increasing role in Wisconsin.
Rarely fish (salmon-AK). [YouTube - Wolves Fishing](#)

Habits & behavior:

Wolves may travel 40 to 50 miles daily when hunting (reported to 125 miles).
Mostly nocturnal- active all night in all kinds of weather.
Always watchful, investigates everything.
Fights viciously and antagonizes those it does not like.
Befriends and "mollycoddles" those of its choosing.
Snarls and bares teeth when angry.
Ears back and tail tucked when defeated or depressed.
Laps objects and wags tail when happy or pleased.
May go from rage or fury one moment to docile and friendly the next.
Usually wary and retreats with suspicious glances from human intruders.
Intensely defends territory by scent marking, howling & patrolling.

Communication:

The wolf uses a series of stereotyped body postures and facial expressions to communicate at close range.
Familiar distinctive howl: A deep, prolonged, "dismal wail" – quite different from the short high-pitched howl and yapping of a coyote.
Five general vocalizations recognized:
High-pitched wail - Usually female at den with pups.
Loud, throaty howl - Loneliness?
Loud, deep, guttural (not harsh) howl - Assembly call of the chase.
Several deep, short, rapid barks - Defending prey or protecting pups at den or rendezvous site.
Deep, explosive snarls - Making a kill.

Social structure:

Wolves exist as single sub-adults, established pairs or in packs.

An average pack is 4 animals, but may be as few as 2 or as large as 37 (Yellowstone), but rarely exceed 8-10 wolves in WI.

Pack size is a function of available free space, prey abundance, individual disposition of the various wolves involved and the degree of pup mortality.

Young wolves usually disperse from home pack as yearlings (or 2 yr olds) to join or establish new packs.

At any one time, 5 – 15% of the entire population may be dispersing animals.

Reproduction:

Breeds in third year.

Breeding commences in late January to early February in the Upper Great Lakes.

Four to six pups (to 13) arrive after 60-63 day gestation (April-WI).

Breeding is restricted to the alpha male and his mate.

Reports of multiple litters may be attributed to a momentary lapse in attentiveness (or vigilance) of the alpha female when a subordinate female is in heat. She normally does not tolerate this behavior.

Subordinate females may go through a false (pseudo) pregnancy which enables them to later lactate. This condition enables them to assist as surrogate nurses to the litter.

The Den:

Usually on well drained soils with an unobstructed view of the surrounding area.

Usually excavated beneath a massive tree trunk, in a cut bank, beneath large boulders, in a cave-like depression, an abandoned beaver lodge, or within wind-drifted pile of debris or brush.

The entrance is typically 15-25" in diameter.

The tunnel is often 6 to 12 feet long, ending with a "dogleg turn", followed by a slight rise to a rounded or oval chamber. This design offers protection (for new pups) from the wind.

The chamber is not furnished with any (or much) bedding material.

The den may be used by the same pair for life.

There may be 3-4 alternate dens in the vicinity.

Growth and maturity:

Most pups will not survive to adulthood.

Annual pup mortality averages 70% in Wisconsin.

At six weeks, pups begin to display a "hierarchy of deference" with each other.

The dynamics of these interactions will change repeatedly during the coming months.

Pups remain in the den until weaned at 8 weeks (late June-WI).

Pups are then moved to a "base of operations" location (rendezvous site).

Rendezvous sites are resting places where pups are left for several days while adults are hunting.

Rendezvous sites are usually at grassy openings with heavy conifer cover and water nearby.

The grassy openings will have many trails and beds in evidence.

In WI, rendezvous sites are frequently established near bear bait stations.

By early October pups are big and strong enough to accompany the pack on hunting forays.

Special Adaptations & limitations:

Runs to 40 mph. Running gate of 18-20 mph. Average sustained trot is 5 mph.

Crushing power of jaws (P.S.I.) is approximately twice that of a German shepherd.

Can fast for a week or gorge 20lbs of meat at a time.

Cannot run as fast as a coyote, but has more endurance.

Swims well and may enter water in pursuit of prey.

Some wolves appear to have entered a mutualistic scavenging relationship with ravens.

Life Span:

Seven to 13 years in wild.

Record of 16 yrs, 3 mo.(Wash. D.C. captive).

Parasites and disease:

The gray wolf is afflicted with the same infectious and parasitic diseases as the coyote.

Canine parvovirus, which attacks the gastrointestinal tract, is especially lethal to wolves.

Infected animals usually die within a few days after infection.

Approx. 40-60% of wolf pups in MN die each year from canine parvovirus.

Management, Damage & Abatement:

Wolf depredations on livestock were relatively uncommon in Wisconsin, but has increased somewhat in recent years (2008).

Cases involve cattle, sheep, turkeys, dogs, and chickens.

Cases average 50% livestock & 50% dogs.

Depredations caused by bears, free-ranging dogs and coyotes are more common.

Warning signs of wolf depredation on livestock:

Animals are tightly bunched and not spread out on pasture.

Sheep become panicked in the presence of herding dogs. (cattle instinctively fear dogs)

Cattle have broken through secure or sound fences.

Stock refuses to enter certain areas.

A drastic change in herd temperament is observed.

An increase in wolf sign (tracks & scat) is observed in the area.

Wolf Conflicts with Dogs:

Peak months for wolf/dog conflicts are July (least), August and September (most).

Wolves defend rendezvous sites during this period (see growth and maturity).

Incidents may also occur in December as breeding season approaches.

Hounds are at the greatest risk due to their far-ranging hunting behavior and constant baying (which may be perceived as a threat or challenge to resident wolves).

A good link for additional info:

<http://dnr.wi.gov/org/land/er/mammals/wolf/wolfhounddog.htm>

Human Dimensions:

By 10,000 YA, close encounters between gray wolves and humans (M. East, Europe or possibly in China) resulted in the first domestication of a canid.

Inuit claim that wolf-dog crosses are “superior beasts” as sled dogs, but difficult to manage.

Some regard the wolf as a natural stimulus of danger, without which most big game animals lose much of their natural charm.

Some final things to consider:

The history of wolf recovery in Wisconsin has been described as one of various interest groups vying for control of wolf policy and the Department of Natural Resources balancing those interests. As of late, a highly successful wolf management policy has emerged which addresses the concerns of the majority of parties directly involved with wolf-related issues in Wisconsin. Unfortunately, certain (well-meaning) outside interest groups continue to interfere with this delicate balancing act by litigating at the federal level. Such lawsuits continue to rob state agencies of critical tools which are essential for managing wolves as a resource which is both biologically sustainable and socially acceptable. This seemingly irreconcilable controversy continues to be one of the most hotly-contested wildlife management issues of our time.

Would you like to know **more?** Check the following links out:

[North Lakeland Discovery Center - Timber Wolf Alliance](#)

<http://www.timberwolfinformation.org/>

<http://dnr.wi.gov/org/land/er/mammals/wolf/>

[Wildlife Science Center](#)

