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SYNONYMS

Goat head, caltrop, tackweed

CLASSIFICATION

RANKING	SCIENTIFIC NAME	COMMON NAME
Kingdom	Plantae	Plants
Subkingdom	Tracheobionta	Vascular plants
Superdivision	Spermatophyta	Seed plants
Division	Magnoliophyta	Flowering plants
Class	Magnoliopsida	Dicotyledons
Subclass	Rosidae	
Order	Sapindales	
Family	Zygophyllaceae	Caltrop family
Genus	<i>Tribulus</i>	
Species	<i>Tribulus terrestris</i> L.	Puncturevine

HISTORY AND DISTRIBUTION

Puncturevine is native to Asia, Africa, and Mediterranean Europe. It was accidentally introduced to North America by 1900 as a contaminant on livestock. It subsequently spread throughout western North America and is currently present in 43 U.S. states and four Canadian provinces (Fig. 1).



Figure 1. Puncturevine reported distribution in North America (Credit: EDDMapS, www.eddmaps.org; USDA PLANTS Database, plants.usda.gov; both accessed 7 December 2023)

IMPACT

Puncturevine creates a dense, sprawling mat that excludes other plant species. Plants produce numerous spiny burs that readily puncture bicycle tires and footwear. The burs also puncture livestock feet and digestive tracts, and they contaminate wool, hay, and crop production. If consumed in large quantities, puncturevine can be toxic to grazing and foraging animals, especially sheep.

IDENTIFICATION

AT A GLANCE

Puncturevine (Fig. 2) is a prostrate annual with a deep taproot and stems that grow from a single point at the crown, creating a mat typically 2–7 ft (60–210 cm) in diameter. The leaves are opposite and compound, with 4–8 pairs of small elliptical leaflets. Flowers are up to ½ in (12 mm) across with five yellow petals. The spiny fruits are ½ in (12 mm) in diameter and break apart into five wedge-shaped, woody burs.

ROOTS

Puncturevine quickly develops a slender but deep taproot (Fig. 3a) that allows it to tolerate dry soils once it is established.

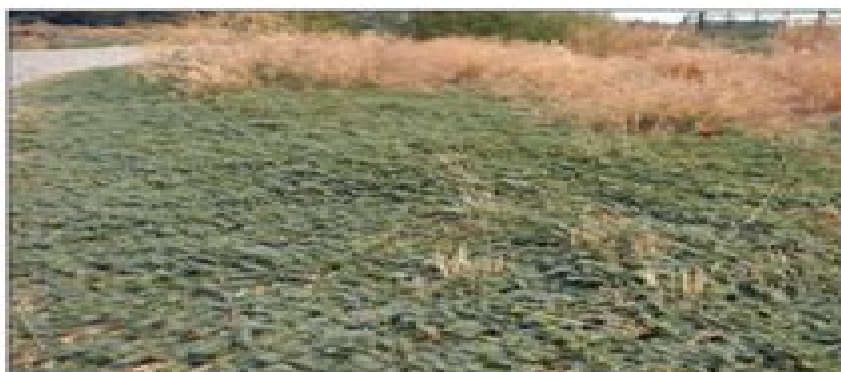


Figure 2. Puncturevine infestation (Travis McMahon, M&A Consulting)

The Ecology Of North America

Jesse Francis McClendon



The Ecology Of North America:

The Ecology of North America Victor Ernest Shelford,1974 The Ecology of North America Victor E. Shelford,1965

The Ecology of North America Creative Educational Society (Mankato, Minn.),1971-01-01 Describes some of the animals of North America their habitats their interrelationships with other animals and plants in their environment and man's role in destroying or maintaining the ecological balance The Ecology Of North America no author listed, *Ecology of North America* Brian R. Chapman, Eric G. Bolen,2015-04-09 North America contains an incredibly diverse array of natural environments each supporting unique systems of plant and animal life These systems the largest of which are biomes form intricate webs of life that have taken millennia to evolve This richly illustrated book introduces readers to this extraordinary array of natural communities and their subtle biological and geological interactions Completely revised and updated throughout the second edition of this successful text takes a qualitative intuitive approach to the subject beginning with an overview of essential ecological terms and concepts such as competitive exclusion taxa niches and succession It then goes on to describe the major biomes and communities that characterize the rich biota of the continent starting with the Tundra and continuing with Boreal Forest Deciduous Forest Grasslands Deserts Montane Forests and Temperate Rain Forest among others Coastal environments including the Laguna Madre seagrasses Chesapeake Bay and barrier islands appear in a new chapter Additionally the book covers many unique features such as pitcher plant bogs muskeg the polar ice cap the cloud forests of Mexico and the LaBrea tar pits Infoboxes have been added these include biographies of historical figures who provided significant contributions to the development of ecology unique circumstances such as frogs and insects that survive freezing and conservation issues such as those concerning puffins and island foxes Throughout the text ecological concepts are worked into the text these include biogeography competitive exclusion succession soil formation and the mechanics of natural selection Ecology of North America 2e is an ideal first text for students interested in natural resources environmental science and biology and it is a useful and attractive addition to the library of anyone interested in understanding and protecting the natural environment The Eternal Frontier Tim Flannery,2018-11-20 A comprehensive history of the continent full of engaging and attention catching information about North America's geology climate and paleontology The Washington Post Book World Here the rock star of modern science tells the unforgettable story of the geological and biological evolution of the North American continent from the time of the asteroid strike that wiped out the dinosaurs 65 million years ago to the present day Jared Diamond Pulitzer Prize winning author of Guns Germs and Steel Flannery describes the development of North America's deciduous forests and other flora and tracks the migrations of various animals to and from Europe Asia and South America showing how plant and animal species have either adapted or become extinct The story spans the massive changes wrought by the ice ages and the coming of the Native Americans It continues right up to the present covering the deforestation of the Northeast the decimation of the buffalo and other consequences of frontier

settlement and the industrial development of the United States This is science writing at its very best both an engrossing narrative and a scholarly trove of information that will forever change your perspective on the North American continent The New York Review of Books **Ecological Regions of North America** ,1997 *The Herbaceous Layer in Forests of Eastern North America* Frank Gilliam,2014-02-05 Over the last decade the field of plant ecology has significantly developed and expanded especially in research concerning the herbaceous layer and ground vegetation of forests This revised second edition of *The Herbaceous Layer in Forests of Eastern North America* accounts for that growth presenting research that approaches the ecology of the herb layer of forests from a variety of disciplines perspectives and levels of ecological organization The book synthesizes the research of top ecologists on herbaceous layer structure composition and dynamics of a variety of forest ecosystem types in eastern North America The 2003 first edition of *The Herbaceous Layer in Forests of Eastern North America* was praised for containing the most extensive listing of herb layer literature in existence This second edition brings this material up to date revised to include current research data and concepts The book incorporates quantitative data to support analyses that were previously unavailable during the publication of the first edition Also featured are eight entirely new chapters with six of these focused on the response of the herbaceous layer to a wide variety of natural and anthropogenic disturbances Building on the over 1 200 references and sources of the first edition the second edition of *The Herbaceous Layer in Forests of Eastern North America* with well over 2 500 references is an invaluable resource for plant ecologists forest ecologists conservationists and forest managers **U.S. Environmental Protection Agency Library System Book Catalog Holdings as of July 1973** United States. Environmental Protection Agency. Library Systems Branch,1974 **Wild Mammals of North America** George A. Feldhamer,Bruce C. Thompson,Joseph A. Chapman,2003-11-19 Table of contents **Excerpta botanica** ,1967 Monthly Catalog of United States Government Publications United States. Superintendent of Documents,1993 **Deciduous Forests of Eastern North America** Emma Lucy Braun,1974 **Restoring North America's Birds** Robert A. Askins,2008-10-01 DIVThe decline of bird species in a wide range of North American habitats forests prairies shrublands mountain regions marshes and deserts has inspired two decades of intense scientific study of bird ecology and conservation But for professional scientists and amateur birders alike interpreting the results of these diverse studies is often complex and bewildering This accessible book pulls together recent research on bird species and habitats to show how basic ecological principles apply in seemingly different situations Robert A Askins provides an engaging introduction to bird ecology and concepts of landscape ecology focusing on such intriguing species as Bachman s Warbler Red Crossbill Mountain Plover and Marbled Murrelet Understanding the ancient landscapes of North America and how humans have changed them Askins says is essential for devising plans to protect and restore bird populations In addition to such obvious changes to the landscape as the clearing of forests and plowing of prairies more subtle changes also dramatically affect birds Species may disappear when we interrupt natural disturbances by suppressing

wildfires or trapping out beaver or when we disrupt habitat with roads and housing developments Askins challenges some of the assumptions that underlie current conservation efforts and offers concrete recommendations based on sound ecological principles for protecting the rich natural diversity of North America's birds

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Library of Congress Catalog: Motion Pictures and Filmstrips Library of Congress, 1968

AMERICA'S CHANGING ENVIRONMENT Roger Revelle, Hans H. Landsberg, 1970

The Ophiurans of the San Diego Region Jesse Francis McClendon, 1909

Ecology and Management of North American Savannas Guy R. McPherson, 2023-01-10

 Savannas are ecosystems with a continuous grass layer and scattered trees or shrubs These lands occupy nearly a third of the earth's land surface and are an important resource not only in world economies but also as repositories of biodiversity Because savannas are generally thought of as tropical ecosystems most reviews of the literature have tended to disregard savannas found in temperate zones Yet these ecosystems are both extensive and diverse in North America ranging from longleaf pine habitats along the Atlantic coastal plain to xeric piñon juniper communities of the Great Basin ecosystems seemingly disparate yet similar enough to merit study as savannas This book provides an overview of the patterns and processes shared by these ecosystems and offers substantive ideas regarding future management and research efforts It describes the composition geographic distribution climate soils and uses of savannas throughout North America summarizing and integrating a wide array of literature While discussing these ecological patterns and processes McPherson develops a framework for implementing management practices and safeguarding the future of these important wildland ecosystems **Ecology and Management of North American Savannas** takes a major step toward establishing the science of savanna ecology for North America It encourages constructive debate and relevant research on these important systems and will also serve as a useful resource in biogeography plant ecology and rangeland management

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