

first century across the United States, in 2003 \$2.4 billion in federal and private funds allowed plans for renovations and new museums to be established in Washington, D.C., with the largest plans undertaken by the Smithsonian, adding two new museums and revamping others. The Smithsonian was by far the most visited of all museums and cultural attractions in 2000, with 34 million visitors.

To offset losses from international visitors, which account for a large percentage of some of the major art museums and galleries, some museums and galleries turned their attention to the domestic market. The Guggenheim, with attendance down 30 percent in the fall of 2001, was down just 8 percent in fall 2002. Mounting a Norman Rockwell show, the museum appealed to Americans' sense of patriotism and drew visitors from the United States. Some museums with a large percentage of local attendees did not fare as well, however. The Brooklyn Museum of Art recorded a 25 percent drop in attendance as of 2002. The Metropolitan Museum of Art had approximately 1 million fewer visitors in 2002.

The Museum of Modern Art's new Queens location, opened to keep its business intact as its main location was being reconstructed, was banking on a blockbuster "Matisse Picasso" exhibit in February 2003, with works drawn from museums and private collections worldwide with an estimated value of \$1.5 billion. To recoup costs, the museum charged an unprecedented \$20 admission fee that caused controversy but was also speculated to be a trend-setting move. The museum rationalized the increased admission as necessary in light of increased insurance costs on art, which have tripled since 9/11. Indeed, the Guggenheim raised admission to \$15 in 2002, and the newly opened Museum of Sex in New York planned to charge \$17, the highest general admission for a museum in New York.

Another trend in this sector was the expansion of gift shop wares. Gift shops were once dominated by postcards and exhibition catalogs but now include jewelry, clothing, home furnishings, books, and toys. While perhaps increasing revenue, the retail end of museum businesses have become so large that, as of early 2003, the Museum of Fine Arts in Boston (MFA) became one of the first museums in the United States to create a separate for-profit retail operation, the MFA-owned Museum Enterprise Partners Inc. Art books have become the most important section of the new business. As new museums are designed, or redesigned, more emphasis has been placed on the amount of retail space to raise revenues. Restaurants have become increasingly important as well.

Museums grew their online presence in the new millennium. Parts of museum collections could be viewed via the Internet, whereas online gift shops provided users access to shop collections. Initially, museums feared that putting their collections online would nega-

tively affect attendance. Instead, they learned that it actually encouraged visits. The Smithsonian has 45 separate Web pages alone, filled with pictures and information. The American Museum of the Moving Image put online its Pinewood Dialogues, an archive of more than 300 film-related interviews with such artists as Mike Nichols, David Cronenberg, and David Lynch.

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SIC 8422

ARBORETA AND BOTANICAL OR ZOOLOGICAL GARDENS

This industry covers establishments primarily engaged in operating arboreta, botanical gardens, zoological gardens, and/or zoological exhibits.

NAICS CODE(S)

712130 (Zoos and Botanical Gardens)

712190 (Nature Parks and Other Similar Institutions)

INDUSTRY SNAPSHOT

In the mid 1990s, there were roughly 300 zoos and botanical gardens and aquariums and 276 nature parks in

the United States. According to the American Zoo and Aquarium Association, such wildlife facilities in North America were visited by more than 130 million people in 1998. The growth and stability of this industry depends largely on the government's surplus funds and on the ability of U.S. families to afford attendance; this industry is closely linked to family entertainment and tourism. Helped in part by both the increase in the population and in leisure time since the start of the twentieth century, the number of establishments in this industry has increased by ten percent every five years.

ORGANIZATION AND STRUCTURE

This industry is organized according to the ownership and management of its establishments. There are five types of establishments: those owned and managed by the government (usually city and community); those owned by the government but managed by a nonprofit society; those owned by the government but jointly managed with a nonprofit society; those owned and managed by a nonprofit society; and those that are privately owned by corporations and individuals. In 1995, roughly 50 percent of the establishments in this industry were owned and managed by the government; nearly 25 percent were owned privately by nonprofit societies; and 25 percent were owned privately by individuals or corporations.

Internal management at these establishments was once loosely structured, often combining volunteers with city and privately-hired employees. But during the early 1990s, the various types of owners developed new, more business-like, management styles to meet the competitive market. The San Diego Zoo, for example, went from managing 50 departments — such as animal keeping and maintenance — to managing diversified teams that claimed responsibility for one particular section of the zoo. Zoos have also modified their focus from merely allowing visitors to view animals to providing educational and hands-on opportunities.

Zoos constantly work to have more exciting, more natural habitat-like exhibits as well. Additionally, many zoos are heavily involved with the Species Survival Plan (SSP) program sponsored by the American Zoo and Aquarium Association (AZA).

The industry is served by many associations, including the AZA; the American Association of Zoo Keepers; the Consortium of Aquariums, Universities, and Zoos; and the California Association of Zoos and Aquariums (CAZA). These organizations reflect well on the industry. AZA reports that in the mid 1990s, its members supported more than 1,200 conservation efforts in approximately 60 countries. CAZA reports that its member zoos and aquariums receive more than 20 million visitors each year and contribute more than \$1.8 billion (combined) to the state's economy each year.

BACKGROUND AND DEVELOPMENT

The concept of the public zoo began in the mid 1800s. Prior to that time, zoos were the private property — and signal of power — of kings and queens. But with the growth of cities and the subsequent increase in the population's leisure time, zoos provided urban dwellers the opportunity to be closer to nature and wildlife and also served as a form of entertainment. Nearly the same can be said for botanical gardens and arboreta, but their origins as public facilities date back to Renaissance Europe. At this time, sculptured gardens were adopted as public art for the middle classes in Italy and later in England.

The first zoo in the United States was opened in 1876 by the Philadelphia Zoological Society as part of America's centennial exposition. Other major U.S. zoos also had their origins in international expositions, which often included animal exhibits from overseas. Zoos in the United States experienced considerable growth and restoration during the 1930s. Public works projects allowed new exhibits and landscaping grounds for zoos to be built. It was also during the 1930s that American zoos developed children's zoos, where children could learn about small animals through direct contact, such as petting, holding, and feeding the animals. These so-called petting zoos are now a standard feature at wildlife facilities around the world.

During the 1980s, the increase in attendance at U.S. zoos and botanical gardens was dramatic. The major wildlife facilities in the United States and Canada reported a 20 percent rise in attendance between 1980 and 1987. This increase beyond expected growth has been explained by three factors: baby-boom parents brought their children to facilities for educational reasons; establishments spent millions of dollars during the late 1970s and early 1980s upgrading their facilities (often as part of urban renewal projects); and the growth in city and suburban populations meant more attendance at local facilities.

Marketing. With increased competition within the arboreta and botanical or zoological gardens, establishments have become more involved in advertising their facilities. Each kind of facility has a different type of market. Zoos and botanical gardens are generally visited by local residents, while aquariums (which are more rare) are visited most often by tourists. Traditionally, marketing in this industry was low key. Zoological societies appealed to a small number of potential donors, and government zoos relied on a predictable portion of the government budget. However, the growth of U.S. cities limited city budgets, and an increase in competition from theme parks and other forms of family entertainment made these establishments invest considerably more in marketing starting in the late 1970s. Zoos saw their attendance increase with the birth of a new animal or the

acquisition of certain endangered species. Promoting these events became an essential part of the marketing package for zoos and aquariums. In 1995, for example, the San Diego Zoo spent roughly \$1.5 million on advertising annually.

Aquariums in the United States have advertised with the help of retail stores. Aquariums played an important part in the redevelopment of many of America's urban waterfronts where they have been placed near shopping districts and malls. In addition, these aquariums, even if privately owned, often received funding from the local governments. One of the largest aquariums in the United States, Monterey Bay National Marine Sanctuary, was built from a renovation of a sardine cannery. Zoos and aquariums have also attempted to increase their market share by expanding their facilities to include theme parks with rides and activities, such as video programs and birthday parties for the animals.

CURRENT CONDITIONS

Establishments in this industry experienced strong growth in the 1980s. Aquariums and zoo-aquariums did particularly well in attendance; according to *American Demographics*, these establishments represented more than 50 percent of all growth in this industry during the 1980s, and between 1980 and 1987 aquarium attendance increased by 50 percent and zoo-aquarium attendance by 80 percent. However, in the 1990s, attendance seems to have leveled off, while still maintaining the growth of the 1980s.

Additionally, upon entering the late 1990s, the U.S. zoos, aquariums, and botanical gardens faced new financial problems as a result of less government funding and an increase in competition from theme parks and newly built aquariums. These concerns have been addressed with an increased emphasis on fund-raising campaigns and continued marketing for sales revenues. In 1997, expenses for zoos were \$1.1 billion, while revenues were only \$127.9 million. Nature parks had revenues of \$129.4 million and expenses of only \$107.5 million.

WORKFORCE

In 1997, there were approximately 15,727 workers in this industry. Of the total number of workers in this industry, slightly more than 3 percent were animal caretakers and nearly 4 percent were gardeners. Some of the larger portions of this workforce included guards (nearly 9 percent of the total workers), cashiers (more than 8 percent), curators and restorers (more than 7 percent), marketing and sales personnel (roughly 5 percent), instructors (more than 5 percent) and administrators and office workers (10 percent). The remaining employees were maintenance and food service workers.

Animal caretakers include the occupations of zoo caretaker and zoo veterinarian. Zoo caretakers feed, water, and clean the quarters of animals and birds; they also work closely with zoo veterinarians on the diets and medications for animals. Zoo veterinarians direct and carry out the health service program at a zoo. Their responsibilities include testing all incoming animals for the prevention of diseases, providing the needed medical attention for animals, and conducting reproduction programs for endangered species.

Gardeners include horticulturists, herbarium workers, and garden workers. Horticulturists determine methods for breeding, storing, and transporting plants (including flowers and vegetables) and trees. These specialists are also responsible for the techniques used in spraying, planting, and cultivating plants and trees. Herbarium workers maintain the records of botanical gardens and arboreta by pressing and mounting plant specimens, which are then kept on card files for loans and exchanges with other establishments. Garden workers cultivate and care for floral and ornamental plant arrangements; their duties include fertilizing, watering, and transplanting flowers and plants in greenhouses and outdoor growing areas.

Job prospects predicted to grow in this industry were mainly in the area of marketing research and development and in fund raising. In related industries, engineers and architects will be needed for the building of new establishments.

AMERICA AND THE WORLD

Worldwide, there are roughly 1,500 botanical gardens and arboreta and more than 3,000 zoos and aquariums. In general, the United States has fewer gardens and arboreta and more zoos and aquariums per capita than countries overseas. The royal places of Europe and the less extreme weather have kept botanical gardens an important part of the European tourism industry. As for zoos and aquariums, the general discrepancies between the United States and other countries can be explained to a large extent by the availability of open spaces in U.S. cities and the availability of larger funds through the family entertainment industry (often working with zoo and aquarium operators to create theme parks).

In 1993, the famous London Zoo closed; its attendance had dropped from three million to slightly more than one million between 1950 and 1990. During the 1980s, the zoo experienced a financial crisis due to a lack of government funded projects and the public's decreasing interest in zoos. (The British public, including its many animal rights groups, have come to prefer safari parks, where the animals roam around freely.) The London Zoo, unlike many U.S. zoos, had not adapted to animal conser-

vationists' concerns for animals to be kept in more natural habitats.

RESEARCH AND TECHNOLOGY

Research in this industry includes the development of environmentally safe sprays and chemicals used in the soil at botanical gardens and arboreta. Aquariums are witnessing technological advances in the construction of their tanks, addressing such problems as materials resistant to salt water damage. Zoos have been investigating ways of making zoo environments more like natural habitats without posing dangers to the public. In addition, zoos are continually improving their care of animals with advances in veterinary medicine.

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SIC 8611

BUSINESS ASSOCIATIONS

This industry classification includes membership organizations engaged in promoting the business interests of their members. Associations owned by their members but organized to perform a specific business function, such as common marketing of crops or joint advertising, are classified according to the function performed.

NAICS CODE(S)

813910 (Business Associations)

INDUSTRY SNAPSHOT

In the mid 1990s, approximately 100,000 business associations operated at local, state, regional, and national levels in the United States, posting over a 40 percent increase since the 1980s. Associations annually contribute over \$48 billion to the U.S. economy, provide nearly 500,000 jobs, and annually spend \$30 billion to host meetings and conventions. According to an Ameri-

can Association of Retired Persons' (AARP) study in 1998, 9 out of 10 adult Americans in the United States belonged to at least one association, and one out of four belonged to four or more associations. As many as 1,000 new groups were being formed each year.

The term "trade association" has been broadly used to describe most business associations. Trade associations are non-profit organizations representing a group of businesses within a particular segment of industry. The membership of these associations is composed primarily of individual company representatives. The oldest trade association in the United States is the New York Chamber of Commerce, which was founded in 1768. The U.S. Chamber of Commerce, headquartered in Washington, D.C. (the city with more associations than any other city), is the country's largest trade association. According to the American Society of Association Executives (ASAE), the largest national association convention in 1997 was that of the National Marine Manufacturers Association when over 170,000 members and guests attended. The Association for Manufacturing Technology was the second largest with over 100,000 attendees.

Trade association staff members perform activities that are too costly or time-consuming for an individual company to perform on its own. These activities include monitoring government regulations, conducting industry research, collecting statistical information, and producing educational programs and materials. Businesses and government depend heavily on associations for their statistical information, which is often not available elsewhere. This type of in-depth research has been spurred on by advances in computer technology, which have allowed trade associations to collect and disseminate industry information on a more timely basis and to a more targeted audience. In fact, by the late 1990s, the implementation of database programs and integrated systems became a necessity for all trade associations. Associations also publish newsletters, periodicals, and directories.

Associations rank as a major segment of the health insurance market and are the source of health insurance for more than 8 million people. They are also the originating source for codes of ethics and professional and safety standards, which govern such professions as law, medicine, banking, and manufacturing.

ORGANIZATION AND STRUCTURE

The following organizations are included under the classification of business associations: boards of trade, other than security and commodity exchanges; business associations, other than civic and social; chambers of commerce; contractors associations; growers associations, not engaged in contract buying or selling; growers marketing advisory services; industrial standards committees; junior chambers of commerce; manufacturers