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# The Access Fund

## ANALYSIS OF FIXED ANCHORS IN WILDERNESS

### Introduction / History

#### Fixed Anchors Defined

"Fixed anchors" are traditional tools which provide safety for technical climbing, caving and canyoneering. A fixed anchor is any piece of equipment left in place while belaying, descending, and lead climbing, to secure a person or rope to the rock and to help navigate dangerous terrain with a modicum of safety. Fixed anchors are essential in many locations, as they permit recreation (sometimes wilderness-dependent) which would not otherwise be possible. Fixed anchors have been used for more than seventy years in this country, in wilderness and in non-wilderness.

Many types of fixed anchors are commonly used by climbers, including **expansion bolts** (small steel shafts placed in holes drilled into the rock, using either a hammer and hand-held drill bit or a battery-powered hammer drill. A "hanger" is attached to each bolt shaft and links the climber to his safety system. In most kinds of rock, bolts are the safest, most reliable type of climbing anchor), **pitons** (metal spikes of various shapes and sizes which are hammered in and out of cracks in the rock), **artificial chockstones** (metal "chocks" or "nuts" which are wedged in cracks), **nylon sling material** (used to wrap around natural features and to form a loop through which a rope can be threaded), **cables** and **chains** (safer and more durable than slings). Natural features of the terrain, including rock protrusions or cavities, trees, and rocks lodged in cracks often serve as components of a fixed anchor.

The Forest Service's 1991 Task Group on Rock Bolts in Wilderness defined fixed anchors as "an integral part" of climbing and recommended to the agency Chief that their use be authorized and managed in national forest Wilderness. The Task Group recognized that prohibiting the use of fixed anchors could compel removal of existing anchors, which could "cause resource damage or present unacceptable safety hazards" to climbers.

## How Fixed Anchors Are Used

Many climbing routes require one or more fixed anchors, if only to enable descent. In virtually all circumstances, only the first ascent party will place fixed anchors on a climbing route, and then only if retrievable protection devices will not provide adequate safety. Subsequent ascents of an established route use fixed anchors placed by the first ascent party but do not place additional fixed anchors, in fact, climbers do not carry equipment for placing bolts unless they are planning a first ascent or will be attempting a route where objective hazards and isolation could require self-rescue in an emergency.

The first ascent party is responsible for determining when and how to protect itself while climbing, protection anchors, including bolts, are placed according to climbers' analysis of various factors which have a bearing on their safety. A climber who places a bolt or other fixed anchor does so only as well as his or her own standards or abilities, or environmental conditions, allow, and does not guarantee its integrity, other climbers who subsequently make use of a fixed anchor assume all risks associated with and deriving from that use. When placed correctly in sound rock, fixed anchors can provide years of usage, but eventually they weaken or disintegrate due to weathering, stresses of use, and other factors. Traditionally, climbers have taken responsibility for replacing fixed anchors on popular or "classic" routes as existing anchors become suspect.

Fixed anchors can be removed, although removal can be difficult (this is desirable from a climbing standpoint). Occasionally, climbers will remove fixed anchors if retrievable protection alternatives are discovered on a route. Experience at numerous climbing areas with different types of rock has shown that it is relatively easy to restore a fixed anchor site to its original appearance.

## American Climbing: A Brief History

In the 1920's and '30's American climbers began actively to seek out new, more technical routes up previously climbed mountains, and to attempt to climb peaks and rock formations which hitherto had been considered too difficult. Such routes demanded new skills and tools. The use of ropes and pitons to create a system of anchors and belays was imported from Europe, and permitted climbers to risk falls while climbing.

As climbing evolved so did the implements used to accomplish it. In 1939 David Brower (who would later become executive director of the Sierra Club) and partners ascended Shiprock, a dramatic rock formation in New Mexico, this climb was especially noteworthy because it involved, for the first time, the use of expansion bolts to protect blank sections of rock.

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From the 1940's to the late 1960's, both bolts and pitons were used extensively as climbing anchors. Pitons typically were removed by the second climber in a climbing party, after being placed by the leader for protection. This practice evolved out of the need to re-employ on subsequent "pitches" (ropelengths) the limited amount of gear that could be carried on longer climbs. By the mid 1960's the repeated placement and removal of pitons began to have a noticeable effect on the rock at popular climbing areas. Bolt use, in contrast, was generally limited by the length of time required for placement, and by the fact that, due to the difficulty of removing them, bolts were typically left in place to be used by other climbers.

In the late 1960's American climbers began experimenting with a new kind of protection developed by the British. "Chocks" could be slotted in cracks by the lead climber and lifted easily out again by his follower, did not damage the rock like pitons, yet were often just as secure. These devices led prominent climbers to espouse a new "clean climbing" ethic, which sought to minimize resource damage. However, this ethic never precluded the use of pitons and bolts, it simply mandated that their use be limited and judicious. For example, on the "big walls" (multi-pitch climbs requiring "aid," i.e. standing in nylon stepladders attached to protection anchors and working one's way up a climb by hanging from successive anchor placements), pitons remained essential tools even as the use of chocks became widespread. And in popular climbing areas with crackless but climbable rock, bolts were commonly used to provide a modicum of safety.

In the late 1970's and early 1980's certain technological advances contributed significantly to the escalation of standards of climbing difficulty. However, perhaps the greatest factor in the rise in standards was the importation in the mid 1980's of European climbing methods. These methods recognized that the hardest rock climbs required a greater degree of safety, since climbers typically fell numerous times before succeeding on them. Much of the climbable rock in Europe is crackless limestone, with bolts being required for protection. The free climbing possibilities on this type of rock were found to be almost limitless. The style of climbing that embraced these possibilities, with its emphasis on steep rock, gymnastic movement and safety over boldness, became known as "Sport Climbing."

Sport Climbing is distinct from adventure-oriented "Traditional Climbing" in several aspects. Sport Climbing places a high priority on convenient access, short approaches, single pitch climbs, minimal risk and socializing while climbing. For these reasons, Sport Climbing is practiced in very few wilderness areas. Traditional Climbing, in contrast, generally emphasizes exploration and solitude, and often requires longer and more difficult approaches, a greater element of risk and self-reliance, and multi-pitch climbs. Climbers seeking a backcountry wilderness climbing experience expect to find fewer people, fewer fixed anchors, and fewer resource impacts than in frontcountry climbing areas or in so-called "urban wilderness" areas.

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Sport Climbing and Traditional Climbing rely on the same equipment to provide safety and help define a route. Where they differ is in the *degree* of reliance on fixed anchors, sport climbs are typified by the exclusive and frequent use of bolts. However, it should be noted that many traditional climbs, some dating from the early 1960's, also depend entirely on bolts for protection.

Sport Climbing, with its emphasis on convenience and athleticism over risk, has become very popular in recent years, but statistics from climbing areas around the country show that climber visitation has grown dramatically *everywhere*, even in those areas where there is little or no Sport Climbing.

### **Influence of the Power Drill**

Since the mid-1980's battery-powered hammer drills have been used by some climbers to place bolts. Power drills are expensive, so few climbers own them. Still, the power drill has been responsible for the majority of bolt placements in recent years. Even using a power drill, however, climbs relying mainly on bolts for protection are labor-intensive to establish. For this reason, bolted routes are largely restricted to frontcountry areas with easy access. Guidebooks and other reference resources show that, since bolts were introduced to climbing fifty-five years ago, their use in backcountry and wilderness areas has been minimal and dispersed.

In contrast to fixed anchors generally, power drills are inappropriate in the wilderness setting. The Access Fund supports a ban on power drill use in wilderness and believes this management action, by itself, will constrain placement of new fixed anchors to a level which does not degrade wilderness character and values.

### **Climbing in Wilderness**

Wilderness managers have long considered climbing to be a form of that "primitive and unconfined recreation" which wilderness is intended to provide, although in recent years some have questioned whether Sport Climbing, with its concentrated use and impacts, is appropriate in wilderness.

Published accounts of notable climbing achievements (such as in the old *Sierra Club Bulletin*) confirm that technical climbing in this country predates the passage of the Wilderness Act by sixty years or more. Many of the tools commonly used by climbers, including fixed anchors also predate the Wilderness Act. In fact, the first ascent of Half Dome, now within the Yosemite Wilderness, was accomplished in 1875 using crude bolt anchors.

A majority of this country's most dramatic, historic, and unusual climbing resources are located in wilderness, and in this regard climbing is a wilderness-

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dependent activity. A database compiled by the Access Fund in early 1995 supports this claim. This resource, titled *Climbing in Wilderness*, documents that climbing occurs in only 30% of all wilderness areas (155 out of 523 total), yet many of the most famous and aesthetic climbing objectives (measured by climbing history and climbing media attention) are found in wilderness.

Moreover, the *Climbing in Wilderness* database indicates that, at present, fixed anchors are used in only 15% of all wilderness areas. Only 11 wilderness areas (2% of total) feature climbing resources where one or more fixed anchors has been placed on 50% or more of known routes. Forty-four wilderness areas with established climbing (83% of total) have recorded fixed anchor placements on fewer than 25% of known routes.

To judge from the record of congressional authorization of new wilderness areas, neither land managers nor congress believe that climbing and the use of fixed anchors have such an adverse effect on the character of a natural area that it cannot be considered and approved for inclusion in the National Wilderness Preservation System once this activity has been documented. There are hundreds of major peaks and other climbing resources that are located in designated or proposed wilderness, mostly in the Western states. Many of these resources, such as the world-famous Mt. Whitney region of the Inyo National Forest, *became designated wilderness after climbers' use of fixed anchors had been documented there*. Other wilderness areas where the use of fixed anchors predates their proposal for and designation as wilderness include the Superstition Mountains Wilderness, Tonto National Forest (AZ), the Sandia Mountains Wilderness, Cibola National Forest (NM), the Wichita Mountains Wilderness, Wichita Mountains National Wildlife Refuge (OK), the Sawtooth Wilderness, Boise, Challis, and Sawtooth National Forests (ID), the Lizard Head Wilderness, San Juan and Uncompahgre National Forests (CO), and the San Jacinto Wilderness, San Bernardino National Forest (CA).

The character of wilderness, and climbing opportunities, vary considerably from area to area, depending on geology, history, and other natural and cultural factors. The *Climbing in Wilderness* database shows that, while fixed anchors are required in relatively few wilderness areas, these tools provide "outstanding opportunities for solitude or a primitive and unconfined type of recreation." Fixed anchors provide a unique quality of experience disproportionate to their numbers, and, in a few wilderness areas with long climbing histories, climbing simply cannot be accomplished without their use.