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## **Interaction with Nature during the Middle Years: It's Importance in Children's Development & Nature's Future**

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### **Children's History of Contact with Nature**

Modern humans (*homo sapiens sapiens*) evolved and have lived in intimate contact with nature, in the savannahs and forests, for almost their entire 120,000± year history. The cultivation of plants and the domestication of animals allowed our ancestors to dwell in permanent settlements, to expand their population more rapidly, thus beginning a long, sad divorce from nature (Manning 2004). It wasn't until recent history that most people lived in cities. But even until very recent history, children still grew up with intimate contact with nature.

For most of history, when children were free to play, their first choice was often to flee to the nearest wild place - whether it was big tree or brushy area in the yard or a watercourse or woodland nearby (Pyle 2002). Two hundred years ago, most children spent their days surrounded by fields, farms or in the wild nature at its edges. By the late twentieth century, many children's environments had become urbanized (Chawla 1994). But even then, as recently as 1970, children had access to nature and the world at large. They spent the bulk of their recreation time outdoors, using the sidewalks, streets, playgrounds, parks, greenways, vacant lots and other spaces "left over" during the urbanization process or the fields, forests, streams and yards of suburbia (Moore 2004, White & Stoecklin 1998). Children had the freedom to play, explore and interact with the natural world with little or no restriction or supervision.

### **Children's Extinction of Experience**

The lives of children today are much different. Children today have few opportunities for free play and regular contact with the natural world. Their physical boundaries have shrunk (Francis 1991, Kyttä 2004) due to a number of factors. A 'culture of fear' has parents afraid for their children's safety. Due to 'stranger danger', many children are no longer free to roam their neighborhoods or even their own yards unless accompanied by adults (Pyle 2002, Herrington & Studtmann 1998, Moore & Wong 1997). Many working families can't supervise their children after school, giving rise to latchkey children who stay indoors or attend supervised after-school activities. Furthermore, children's lives have become structured and scheduled by adults, who hold the mistaken belief that this

sport or that lesson will make their children more successful as adults (Moore & Wong 1997, White & Stoecklin 1998). The culture of childhood that played outside is gone and children's everyday life has shifted to the indoors (Hart 1999, Moore 2004). As a result, children's opportunity for direct and spontaneous contact with nature is a vanishing experience of childhood (Rivkin 1990, Chawla 1994, Kellert 2002, Pyle 2002, Kuo 2003, Malone 2004). One researcher has gone so far as to refer to this sudden shift in children's lives and their loss of free play in the outdoors as a 'childhood of imprisonment' (Francis 1991). Childhood and regular play in the natural world is no longer synonymous. Pyle (1993) calls this the 'extinction of experience', which breeds apathy towards environmental concerns.

Kellert (2002) says society today has become "so estranged from its natural origins, it has failed to recognize our species' basic dependence on nature as a condition of growth and development."

Not only have children's play environments dramatically changed in the last few decades, but also the time they have to play has decreased. Between 1981 and 1997, the amount of time children ages 6 to 8 in the U.S. played decreased 25%, by almost four hours per week, from 15 hours a week to 11 hours and 10 minutes. During the same period, the time they spent in school increased by almost 5 hours (Hofferth & Sandberg 2000).

## **The Importance of Children's Interaction with Nature**

A growing body of literature shows that the natural environment has profound effects on the well-being of children, including better psychological well-being, superior cognitive functioning, fewer physical ailments and speedier recovery from illness (Wells 2003). It is widely accepted that the environment is likely to have a more profound effect on children due to their greater plasticity or vulnerability (Wells 2003).

Research is providing convincing evidence of the significant benefits of experiences in nature to children. Findings include:

- Children with symptoms of Attention Deficit Hyperactivity Disorder (ADHD) are better able to concentrate after contact with nature (Taylor 2001).
- Children with views of and contact with nature score higher on tests of concentration and self-discipline. The greener, the better the scores (Wells 2000, Taylor 2002).
- Children who play regularly in natural environments show more advanced motor fitness, including coordination, balance and agility, and they are sick less often (Grahn, et al. 1997, Fjortoft 2001).
- When children play in natural environments, their play is more diverse with imaginative and creative play that fosters language and collaborative skills (Moore & Wong 1997, Taylor, et al. 1998, Fjortoft 2000).
- Exposure to natural environments improves children's cognitive development by improving their awareness, reasoning and observational skills (Pyle 2002).
- Nature buffers the impact of life stress on children and helps them deal with adversity. The greater the amount of nature exposure, the greater the benefits (Wells 2003).
- Play in a diverse natural environment reduces or eliminates bullying (Malone & Tranter 2003).
- Nature helps children develop powers of observation and creativity and instills a sense of peace and being at one with the world (Crain 2001).

- Early experiences with the natural world have been positively linked with the development of imagination and the sense of wonder (Cobb 1977, Louv 1991). Wonder is an important motivator for life long learning (Wilson 1997).
- Children who play in nature have more positive feelings about each other (Moore 1996).
- Natural environments stimulate social interaction between children (Moore 1986, Bixler, Floyd & Hammutt 2002).
- Outdoor environments are important to children's development of independence and autonomy (Bartlett 1996).

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