

Nigel Young

Long Distance Walking Tracks: Impacts and Experiences

Biophysical Impacts and Psychosocial Experiences Associated With Use of Long Distance Walking Tracks in the Wet Tropics Region of North Queensland



REFERENCES

Absher, J. (1994). Beyond carrying capacity. Ranger. Spring Edition: 30-32.

Aitken, S.C. (1991). Person-environment theories in contemporary perceptual and behavioural geography: personality, attitudinal and spatial choice theories. *Progress in Human Geography* 15 (2): 179-193.

Anderson, D.H., Lime, D.W. and Wang, T.L. (1998). Maintaining the Quality of Park Resources and Visitor Experiences: A Handbook for Managers. Cooperative Park Studies Unit, University of Minnesota. MN.

Anders Sandberg, L. and Midgley, C. (2000). Recreation, forestry and environmental management: the Haliburton Forest and Wildlife Reserve, Ontario, Canada. In: Font, X. and Tribe, J. (Editors). *Forest Tourism and Recreation: Case studies in environmental management.* pp: 201-215. CABI Publishing, New York.

Appleton, J. (1975). The Experience of Landscape. John Wiley. New York.

Arts Queensland. (2004). *Queensland Heritage Trails Network*. [Online] URL: Viewed 7 December 2004. http://www.heritagetrails.qld.gov.au/attractions/tropics2.html

Arrowsmith, C. and Inbakaran, R. (2002). Estimating environmental resiliency for the Grampians National Park, Victoria, Australia: a quantitative approach. *Tourism Management* 23 (3): 295-309.

Australian Heritage Commission. (1986). *Tropical Rainforests of North Queensland: Their Conservation Significance*. Australian Government Publishing Service. Canberra, ACT.

Babbie, E. (1992). *The Practice of Social Research*. Wadsworth Publishing Company. Belmont, CA.

Babbie, E. (2001). *The Practice of Social Research*. 9th Edition. Wadsworth Publishing Company. Belmont, CA.

Balling, J. and Falk, J. (1982). Development of visual preference for natural events. *Environment and Behavior* 14: 5-28.

Barron, F. (1995). Recreational carrying capacity of the Daintree region between the Daintree and Bloomfield rivers and implications for recreation planning and management. Honours Thesis. James Cook University, Cairns, QLD.

Bechtel, R.B. (1997). *Environment & Behavior: An Introduction*. SAGE Publications, Inc. Thousand Oaks, CA.

Beeton, S. (1999). Hoofing it – on four or two feet? Managing multi-use trails and sites. *Current Issues in Tourism* 2 (2): 211-225.

Bell, P.A., Greene, T.C., Fisher, J.D. and Baum, A. (2001). *Environmental Psychology*. 5th Edition. Thomson Wadsworth Group. Belmont, CA.

Bentrupperbäumer, J.M. (2003). Department of Tropical Environmental Studies and Geography, James Cook University, Cairns, QLD. *Personal Communication*. 16 November 2003.

Bentrupperbäumer, J.M. and Reser, J.P. (2000). Impacts of Visitation and Use: Psychosocial and Biophysical Windows on Visitation and Use in the Wet Tropics World Heritage Area. Rainforest Cooperative Research Centre, Cairns, QLD.

Bentrupperbäumer, J.M. and Reser, J.P. (2002). Measuring & Monitoring Impacts of Visitation & Use in the Wet Tropics World Heritage Area: A Site Based Bioregional Perspective. Rainforest Cooperative Research Centre, Cairns, QLD.

Blamey, R. (1995). *The Nature of Ecotourism*. BTR Occasional Paper No. 21. Bureau of Tourism Research, Canberra, ACT.

Bonell, M. (1991). Progress and future research needs in water catchment conservation within the wet tropical coast of northeast Queensland. In: Goudberg, N., Bonnell, M. and Benzaken, D. (Editors). *Tropical Rainforest Research in Australia*. pp: 45-50. Institute for Tropical Rainforest Studies. Townsville, QLD.

Bonnes, M. and Secchiaroli, G. (1995). Environmental Psychology: A Psycho-social Introduction. Sage Publications, London.

Boo, E. (1990). *Ecotourism: The Potential and Pitfalls*. Volumes 1 and 2. World Wide Fund for Nature. Washington DC.

Boucher, D.H., Aviles, J., Chepote, R., Dominguez Gil, O.E. and Vilchez, B. (1991). Recovery of trailside vegetation from trampling in a tropical rainforest. *Environmental Management* 15 (2): 257-262.

Bourque, L.B. and Fielder, E.P. (2003). How to Conduct Self-Administered and Mail Surveys. 2^{nd} Edition. Sage Publications, London.

Boyd, P.P. (2004). National Parks: Wilderness and Culture. In: Lew, A.A., Hall, M.C. and Williams, A.M. (Editors). *A Companion to Tourism*. pp: 473-483. Blackwell Publishing, Oxford.

Bratton, S.P., Hickler, M.G. and Graves, J.H. (1979). Trail erosion patterns in Great Smoky Mountains National Park. *Environmental Management* 3 (5): 431-445.

Bridle, K. and Kirkpatrick, J.B. (2003). Impacts of nutrient additions and digging for human waste disposal in natural environments, Tasmania, Australia. *Journal of Environmental Management* 69 (3): 299-306.

Bridle, K. and Kirkpatrick, J.B. (2005). An analysis of the breakdown of paper products (toilet paper, tissues and tampons) in natural environments, Tasmania, Australia. *Journal of Environmental Management* 74 (1): 21-30.

Brown, B.N. (1976). *Phytophthora cinnamomi* associated with patch death in tropical rainforests in Queensland. *Australian Plant Pathology Society Newsletter* 5: 1-4.

Bryden, N. (2001). Recreational displacement of local residents in the Wet Tropics of Queensland: implications for planning and management. Masters Thesis. James Cook University, Cairns, QLD.

Buckley, R. (1998). Tools and indicators for managing tourism in parks. *Annals of Tourism Research* 25 (4): 208-211.

Buckley, R. and King, N. (2003). Visitor-impact data in a land-management context. In: Buckley, R., Pickering, C. and Weaver, D.B. (Editors). *Nature-based Tourism, Environment and Land Management*. pp: 89-99. CABI Publishing, Cambridge, MA.

Buckley, R. and Pannell, J. (1990). Environmental impacts of tourism and recreation in national parks and conservation reserves. *Journal of Tourism Studies* 1 (1): 24-32.

Burden, R.F. and Randerson, P.F. (1972). Quantitative studies of the effects of human trampling on vegetation as an aid to the management of semi-natural areas. *Journal of Applied Ecology* 9: 439-457.

Bureau of Meteorology. (2006). *Tropical Cyclone Larry*. [Online] URL: Viewed 22 April 2006. http://www.bom.gov.au/weather/qld/cyclone/tc_larry/

Bushell, R. (2003). Balancing conservation and visitation in protected areas. In: Buckley, R., Pickering, C. and Weaver, D.B. (Editors). *Nature-based Tourism, Environment and Land Management*. pp: 197-208. CABI Publishing, Cambridge, MA.

Butler, J. (2002). Biophysical and psychosocial impacts of undesignated walking tracks within the WTWHA. Honours Thesis. James Cook University, Cairns, QLD.

Calais, S.S. and Kirkpatrick, J.B. (1986). Impact of trampling on natural ecosystems in the Cradle Mountain – Lake St. Claire National Park. *Australian Geographer* 17: 6-15.

Canham, C.D. (1988). An index for understorey light levels in and around canopy gaps. *Ecology* 69 (5): 1634-1638.

Cassidy, T. (1997). Environmental Psychology: Behaviour and Experience in Context. Psychology Press Ltd, Hove, UK.

Cessford, G.R. (1997a). Visitor satisfactions, impact perceptions, and attitudes toward management options on the Heaphy Track. *Science for Conservation*. No. 82.

Cessford, G.R. (1997b). Visitor satisfactions, impact perceptions, and attitudes toward management options on the Tongariro Circuit Track. *Science for Conservation*. No. 65.

Chazdon, R.L. (1986). Light variation and carbon gain in rainforest understorey palms. *Journal of Ecology* 74: 995-1012.

- **Chhetri, P., Arrowsmith, C. and Jackson, M.** (2004). Determining hiking experiences in nature-based tourist destinations. *Tourism Management* 25: 31-43.
- Chin, C.L.M., Moore, S.A., Wallington, T.J. and Dowling, R.K. (2000). Ecotourism in Bako National Park, Borneo: visitors' perspectives on environmental impacts and their management. *Journal of Sustainable Tourism* 8 (1): 20-35.
- **Cialdini, R.B., Reno, R.R. and Kallgren, C.A.** (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology* 58: 1015-1026.
- **Climburg, A., Monz, C. and Kehoe, S.** (2000). Wildland recreation and human waste: a review of problems, practices and concerns. *Environmental Management* 25 (6): 587-598
- Clark, R.N. and Stankey, G.H. (1979). The Recreation Opportunity Spectrum: A Framework for Planning, Management, and Research. United States Department of Agriculture, Forest Service (General Technical Report. PNW 98). Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- **Clawson, M. and Knetsch, K.** (1966). *Economics of Outdoor Recreation*. John Hopkins Press. Baltimore, MD.
- Coakes, S.J. and Steed, L.G. (2003). SPSS: Analysis without anguish, Version 11.0 for Windows. John Wiley & Sons, Milton, QLD.
- Coble, T.G., Selin, S.W. and Erickson, B.B. (2003). Hiking alone: understanding fear, negotiation strategies and leisure. *Journal of Leisure Research* 35 (1): 1-22.
- Cole, D.N. (1978). Estimating the susceptibility of wildland vegetation to trailside alteration. *Journal of Applied Ecology* 15: 281-286.
- **Cole, D.N.** (1981). Managing ecological impacts at wilderness campsites: an evaluation of techniques. *Journal of Forestry* 79: 86-89.
- **Cole, D.N.** (1982). Wilderness campsite impacts: effect of amount of use. *United States Department of Agriculture, Forest Service Research Paper. INT* 284. Intermountain Forest and Range Experiment Station, Ogden, UT.
- **Cole, D.N.** (1983). Assessing and monitoring backcountry trail conditions. *United States Department of Agriculture, Forest Service Research Paper. INT 303*. Intermountain Forest and Range Experiment Station, Ogden, UT.
- Cole, D.N. (1985). Recreational trampling effects on six habitat types in western Montana. *United States Department of Agriculture, Forest Service Research Paper. INT* 350. Intermountain Forest and Range Experiment Station, Ogden, UT.
- Cole, D.N. (1987). Effects of three seasons of experimental trampling on five montane forest communities and a grassland in western Montana, USA. *Biological Conservation* 40: 219-244.

- **Cole, D.N.** (1988). Disturbance and recovery of trampled montane grassland and forests in Montana. *United States Department of Agriculture, Forest Service Research Paper. INT* 389. Intermountain Forest and Range Experiment Station, Ogden, UT.
- **Cole, D.N.** (1996). Wilderness recreation use trends, 1965 through 1994. *United States Department of Agriculture, Forest Service Research Paper. INT 448*. Intermountain Forest and Range Experiment Station, Ogden, UT.
- Cole, D.N. (2000). Biophysical impacts of wildland recreation use. In: Gartner, W.C. and Lime, D.W. (Editors). *Trends in Outdoor Recreation, Leisure and Tourism*. pp: 257-264. CABI Publishing, New York.
- **Cole, D.N. and Bayfield, N.G.** (1993). Recreational trampling of vegetation: standard experimental procedures. *Biological Conservation* 63: 209-215.
- Cole, D.N. and Marion, J.L. (1988). Recreation impacts in some riparian forests of the eastern United States. *Environmental Management* 12 (1): 99-107.
- **Cole, D.N. and Schreiner, E.G.** (1981). Impacts of back-country recreation: site management and rehabilitation an annotated bibliography. *United States Department of Agriculture, Forest Service Research Paper. INT 121*. Intermountain Forest and Range Experiment Station, Ogden, UT.
- Cole, D.N. and Trull, S.J. (1992). Quantifying vegetation response to recreational disturbance in the North Cascades, Washington. *Northwest Scientist* 66: 229-236.
- **Cole, D.N., Petersen, M.E. and Lucas, R.C.** (1987). Managing wilderness recreation use: common problems and potential solutions. *United States Department of Agriculture, Forest Service General Technical Report. INT* 230. Intermountain Forest and Range Experiment Station, Ogden, UT.
- **Congdon, R.A. and Herbohn, J.L.** (1993). Ecosystem dynamics of disturbed and undisturbed sites in north Queensland wet tropical rainforest: floristic composition, climate and soil chemistry. *Journal of Tropical Ecology* 9: 349-363.
- Cook, A. and Harrison, S. (2002). Economic evaluation of proposed long-distance walking tracks in the Wet Tropics of Queensland. *Economic Analysis & Policy* 32 (2): 113-129.
- Cornu, S., Luizão, F., Rouiller, J. and Lucas, Y. (1997). Comparative study of litter decomposition and mineral element release in two Amazonian forest ecosystems litter bag experiments. *Pedobiologia* 41: 456-471.
- Davenport, L., Brockelman, W.Y., Wright, P.C., Ruf, K. and Rubio Del Valle, F.B. (2002). Ecotourism tools for parks. In: Terborgh, J., van Schaik, L., Davenport, L. and Rao, M. (Editors). *Making Parks Work: Strategies for Preserving Tropical Nature*. pp: 279-306. Island Press, Washington DC.

- **Davidson, P.A.** (2004). The social construction of Jenolan Caves: multiple meanings of a cave tourist site. PhD Thesis. James Cook University, Townsville, QLD.
- Day, T.J. and Turton, S.M. (2000a). Ecological impacts of recreation in protected areas: a review In: Bentrupperbäumer, J and Reser, J. (Editors). *Impacts of Visitation and Use: Psychosocial and Biophysical Windows on Visitation and Use in the Wet Tropics World Heritage Area*. pp: 120-122. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.
- Day, T.J. and Turton, S.M. (2000b). Ecological impacts of recreation along mountain bike & walking tracks. In: Bentrupperbäumer, J and Reser, J. (Editors). *Impacts of Visitation and Use: Psychosocial and Biophysical Windows on Visitation and Use in the Wet Tropics World Heritage Area.* pp: 143-152. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.
- **de Gouvenain, R.C.** (1996). Indirect impacts of soil trampling on tree growth and plant succession in the North Cascade Mountains of Washington. *Biological Conservation* 75: 279-287.
- Deng, J., Qiang, S., Walker, G.J. and Zhang, Y. (2003). Assessment on and perception of visitors' environmental impacts on nature tourism: a case study of Zhangjiajie National Forest Park, China. *Journal of Sustainable Tourism* 11 (6): 529-548.
- **Denslow, J.S.** (1980). Gap partitioning among tropical rainforest trees. *Biotropica* 12: 47-55.
- **Denslow, J.S.** (1987). Tropical rainforest gaps and tree species diversity. *Annual Review of Ecology and Systematics* 18: 431-451.
- **Diekhoff, G.** (1992). Statistics for the Social and Behavioural Sciences: Univariate, Bivariate, Multivariate. Wm. C. Brown Publishers. Dubuque, IA.
- **Ditton, R.B., Fedler, A.J. and Graefe, A.R.** (1983). Factors contributing to perceptions of recreational crowding. *Leisure Sciences* 5 (4): 273-288.
- **Dorwart, C.E., Leung, Y.F. and Moore, R.** (2004). Managing visitors' perceptions. *Parks & Recreation* 5: 24-31.
- **Douglas, J.** (2004). Conservation Officer, Queensland Parks and Wildlife Service, Cardwell, QLD. *Personal Communication*. 23 June 2004.
- **Driml, S.** (1997). *Towards Sustainable Tourism in the Wet Tropics World Heritage Area*. Report to the Wet Tropics Management Authority, Cairns, QLD.
- **Driver, B.L., Nash, R. and Haas, G.** (1987). Wilderness benefits: a state-of-knowledge review. In: Lucas, R.C. (Editor). *Proceedings-National Wilderness Research Conference: Issues, State-of-knowledge, Future Directions.* pp: 294-319. United States Department of Agriculture, Intermountain Forest and Range Experiment Station, Ogden, UT.

Dytham, C. (1999). Choosing and Using Statistics: A Biologist's Guide. Blackwell Science, Melbourne, VIC.

Eagles, P.F.J. and McCool, S.F. (2002). Tourism in National Parks and Protected Areas: Planning and Management. CABI Publishing, New York.

Edwards, P., Roberts, I., Clarke, M., DiGuiseppi, C., Pratap, S., Wentz, R. and Kwan, I. (2002). Increasing response rates to postal questionnaires: systematic review. *BMJ* 324: 1-9.

Englin, J.E., McDonald, J.M. and Moeltner, K. (2006). Valuing ancient forest ecosystems: an analysis of backcountry hiking in Jasper National Park. *Ecological Economics* 57 (4): 665-678.

Environmental Protection Agency. (2005). Wet Tropics Great Walk. [Online] URL: Viewed 5 November 2005. http://www.epa.qld.gov.au/parks_and_forests/great_walks/

Evans, G.W. and Lepore, S.J. (1992). Conceptual and analytic issues in crowding research. *Journal of Environmental Psychology* 12: 163-173.

Evans, S. (2000). Ecotourism in tropical rainforests: an environmental management option for threatened resources? In: Font, X. and Tribe, J. (Editors). *Forest Tourism and Recreation: Case studies in environmental management*. pp: 127-142. CABI Publishing, New York.

Ewert, A. and Hollenhurst, S. (1989). Testing the adventure model: empirical support for a model of risk recreation. *Journal of Leisure Research* 21: 124-139.

Farrell, T.A. and Marion, J.L. (2001). Identifying and assessing ecotourism visitor impacts at eight protected areas in Costa Rica and Belize. *Environmental Conservation* 28 (3): 215-225.

Farrell, T., Hall, T., and White, D. (2001). Wilderness campers' perception and evaluation of campsite impacts. *Journal of Leisure Research* 33 (3): 229-250.

Farsari, Y. and Prastacos, P. (2004). GIS applications in the planning and management of tourism. In: Lew, A.A., Hall, M.C. and Williams, A.M. (Editors). *A Companion to Tourism*. pp: 596-607. Blackwell Publishing, Oxford.

Fennell, D.A. (2003). Ecotourism: An Introduction. 2nd Edition. Routledge, London.

Fink, A. and Kosecoff, J. (1985). How to Conduct Surveys: A Step-by-Step Guide. Sage Publications, London.

Fisher, J.D., Bell, P.A. and Baum, A. (1984). *Environmental Psychology*. 2nd Edition. CBS College Publishing, New York.

Fisher, S.G. and Grimm, N.B. (1991). Streams and disturbance: are cross-ecosystem comparisons useful? In: Cole, J., Lovett, G. and Findlay, S. (Editors). *Comparative Analyses of Ecosystems*. pp: 196-221. Springer-Verlag, New York.

Fletcher, J.E. (1984). Effectiveness evaluation of management alternatives for dealing with park safety and security problems. *Trends* 21: 31-35.

Font, X. and Tribe, J. (2000). Recreation, conservation and timber production. In: Font, X. and Tribe, J. (Editors). *Forest Tourism and Recreation: Case studies in environmental management*. pp: 1-22. CABI Publishing, New York.

Frankfort-Nachmias, C. and Nachmias, D. (1992). *Research Methods in the Social Sciences*. 4th Edition. Edward Arnold, London.

Frenkel, R.E. (1972). Trampled vegetation and floristic convergence in the tropics. *Association of Pacific Coast Geographers Yearbook* 34: 87-98.

Gadek, P.A., Gillieson, D., Edwards, W., Landsberg, J. and Pryce, J. (2001). Rainforest dieback mapping and assessment in the Wet Tropics World Heritage Area. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.

Gadek, P.A. and Worboys, S.J. (2002). Rainforest dieback: assessment of the risks associated with road and walking track access in the World Heritage Area. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.

Galloway, G. (2002). Psychographic segmentation of park visitor markets: evidence for the utility of sensation seeking. *Tourism Management* 23: 581-596.

Gardner, T. (1994). Visitor monitoring programs in urban parks and natural areas – taking a strategic approach. *Australian Parks and Recreation* 30 (3): 27-31.

Garland, G.G. (1990). Technique for assessing erosion risk from mountain footpaths. *Environmental Management* 14 (6): 793-798.

Gentilli, J. (1972). Australian Climate Patterns. Nelson, Melbourne, VIC.

Ghimire, K. B. and Pimbert, M.P. (1997). *Social Change and Conservation*. Earthscan, London.

Gifford, R. (1996). *Environmental Psychology: Principles and Practice*. 2nd Edition. Allyn and Bacon, Sydney, NSW.

Gladwell, M. (2000). The Tipping Point: How Little Things Can Make a Big Difference. Little, Brown and Company, London.

Gomez-Pompa, A. and Kaus, A. (1992). Taming the wilderness myth: environmental policy and education are currently based on Western beliefs about nature rather than on reality. *Bioscience* 42 (4): 271-279.

Goosem, M.W. (1997). Internal fragmentation: the effects of roads, highways, and powerline clearings on movement and mortality of rainforest vertebrates. In: Laurance,

W.F. and Bierregaard, R.O. Jr. (Editors). *Tropical Forest Remnants: Ecology, Management, and Conservation of Fragmented Communities*. pp: 241-255. The University of Chicago Press, MI.

Goosem, M.W. (2000). Effects of tropical rainforest roads on small mammals: edge effects in community composition. *Wildlife Research* 27: 151-163.

Goosem, M.W. (2002). Effects of tropical rainforest roads on small mammals: fragmentation, edge effects and traffic disturbance. *Wildlife Research* 29: 277-289.

Goosem, M.W. and Turton, S.M. (1998). Impacts of Roads and Powerline Corridors on the Wet Tropics of Queensland World Heritage Area, Stage 1. Wet Tropics Management Authority and Rainforest CRC, Cairns, QLD.

Goosem, M.W. and Turton, S.M. (2000). Impacts of Roads and Powerline Corridors on the Wet Tropics of Queensland World Heritage Area, Stage 2. Wet Tropics Management Authority and Rainforest CRC, Cairns, QLD.

Graefe, A.R. (1987). Wildland Recreation. In: Graefe, A.R. and Parker, S. (Editors). *Recreation and Leisure: An Introductory Handbook*. pp. 169-173. Venture Publishing, London.

Graefe, A.R. and Vaske, J.J. (1987). A framework for managing quality in the tourist experience. *Annals of Tourism Research* 14 (3): 390-404.

Graefe, A.R., Kuss, F.R. and Vaske, J.J. (1990). *Visitor Impact Management: The Planning Framework*. Vol. 2. National Parks and Conservation Association. Washington DC.

Graham, A.W. (1994). An assessment of the impacts and effects of pathways and trails on the physical and biological characteristics of four tropical soils on the Atherton Tablelands. CSIRO Division of Wildlife and Ecology Technical Report. Tropical Forest Research Centre, Atherton, QLD.

Graham, A.W. and Hopkins, M.S. (1993). Ecological prerequisites for managing change in tropical rainforest ecosystems. In: McIntyre, N. (Editor). *Track to the Future – Managing Change in Parks and Recreation*. Royal Australian Institute of Parks and Recreation. National Conference, Cairns, QLD.

Gramann, J.H. and Burdge, R.J. (1984). Crowding perception determinants at intensively developed outdoor recreation sites. *Leisure Sciences* 6 (2): 167-185.

Hall, M.C. and Higham, J. (2000). Wilderness management in the forests of New Zealand: historical development and contemporary issues in environmental management. In: Font, X. and Tribe, J. (Editors). Forest Tourism and Recreation: Case studies in environmental management. pp: 143-160. CABI Publishing, New York.

Hammitt, W.E. and Cole, D.N. (1998). *Wilderness Recreation: Ecology and Management.* 2nd Edition. John Wiley & Sons, New York.

- **Hammitt, W.E. and Schneider, I.E.** (2000). Recreation conflict management. In: Gartner, W.C. and Lime, D.W. (Editors). *Trends in Outdoor Recreation, Leisure and Tourism.* pp: 347-356. CABI Publishing, New York.
- **Hammitt, W.E., McDonald, C.D. and Noe, F.P.** (1984). Use level and encounters: important variables of perceived crowding among non-specialized recreationists. *Journal of Leisure Research* 16: 1-8.
- Harrison, D. and Price, M.F. (1996). Fragile environments, fragile communities? An introduction. In: Price, M.F. (Editor). *People and Tourism in Fragile Environments*. pp: 1-18. Royal Geographical Society and John Wiley & Sons, Chichester, UK.
- **Hartig, T. and Evans, G.W.** (1993). Psychological foundations of nature experience. In: Gärling, T. and Golledge, R.G. (Editors). *Behaviour and Environment: Psychological and Geographical Approaches*. pp: 427-457. Elsevier Science Publishers, Amsterdam, NI
- Hawes, M. (1996). A track management strategy for the Tasmanian Wilderness World Heritage Area. *Australian Parks and Recreation*, 32 (Winter): 18-26.
- Hecht, S. and Cockburn, A. (1990). The Fate of the Forest: Developers, Destroyers and Defenders of the Amazon. Harper Perennial, New York.
- **Hendee, J.C., Stankey, G.H. and Lucas, R.C.** (1990). *Wilderness Management*. 2nd Edition. North American Press (Fulcrum Publishing), Golden, CO.
- **Henderson, J.C.** (2000). The survival of a forest fragment: Bukit Timah Nature Reserve, Singapore. In: Font, X. and Tribe, J. (Editors). *Forest Tourism and Recreation: Case studies in environmental management*. pp: 23-39. CABI Publishing, New York.
- **Henderson, K.A. and Bialeschki, M.D.** (1993). Fear as a constraint to active lifestyles for females. *Journal of Physical Education, Recreation & Dance* 64 (1): 44-47.
- **Henry, G.T.** (1998). Practical sampling. In: Bickman, L. and Rog, D.J. (Editors). *Handbook of Applied Social Research Methods*. pp: 101-126. Sage Publications, Thousand Oaks, CA.
- Hillery, M.; Nancarrow, B., Griffin, G. and Syme, G. (2001). Tourist perception of environmental impact. *Annals of Tourism Research* 28 (4): 853-867.
- **Holdgate, M. and Philips, A.** (1999). Protected areas in context. In: Walkey, M., Swingland, I. and Russell, S. (Editors). *Integrated Protected Area Management*. pp. 1-24. Kluwer Academic Publishers, Dordrecht, NL.
- **Holling, C.S.** (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics* 4: 1-23.
- Horneman, L.N., Beeton, R.J.S. and Hockings, M. (2002). Monitoring Visitors to Natural Areas: A Manual with Standard Methodological Guidelines. The University of Queensland, Gatton Campus, QLD.

Hull, R.B. and Stewart, W.P. (1995). The landscape encountered and experienced while hiking. *Environment and Behaviour* 27: 404-426.

Hunter, C. and Green, H. (1995). Tourism and the Environment: A Sustainability Relationship? Routledge, London.

International Union for the Conservation of Nature. (1994). *United Nations List of National Parks and Protected Areas*. IUCN, Gland, CH.

Jackson, L. (2003). Ranger in Charge, Queensland Parks and Wildlife Service, Josephine Falls. *Personal Communication*. 16 May 2003.

Jacob, G.R. and Schreyer, R. (1980). Conflict in outdoor recreation: a theoretical perspective. *Journal of Leisure Research* 12: 368-380.

Jakes, P., Dwyer, J. and Carr, D. (1998). Demonstrating the value of a social science research program to a natural resource management agency: In: *Proceedings of the 1997 Northeastern Recreation Research Symposium. United States Department of Agriculture, Forest Service General Technical Report. NE – 241. pp: 228-233. Intermountain Forest and Range Experiment Station, Ogden, UT.*

Jim, C.Y. (1987). Trampling impacts of recreationists on picnic sites in a Hong Kong country park. *Environmental Conservation* 14 (2): 117-127.

Jusoff, K. (1989). Physical soil-properties associated with recreational use of a forested reserve area in Malaysia. *Environmental Conservation* 16 (4): 339-342.

Kahn, P.H. (1999). *The Human Relationship with Nature: Development and Culture*. The MIT Press. Cambridge, MA.

Kaplan, R. and Kaplan, S. (1989). The Experience of Nature: A Psychological Perspective. Cambridge University Press, UK.

Karger, L. (1997). Impacts of trampling on vegetation and soils along low and high use walking tracks at Mossman Gorge, northeast Queensland. Honours Thesis. James Cook University, Cairns, QLD.

Kearsley, G.W. (2000). Balancing tourism and wilderness qualities in New Zealand's native forests. In: Font, X. and Tribe, J. (Editors). *Forest Tourism and Recreation: Case studies in environmental management*. pp: 75-91. CABI Publishing, New York.

Kearsley, G.W. and Coughlan, D.P. (1999). Coping with crowding: tourist displacement in the New Zealand backcountry. *Current Issues in Tourism* 2 (3): 197-210.

Kearsley, G.W., Coughlan, D.P., Higham, J.E.S., Higham, E.C. and Thyne, M.A. (1998). *Impacts of Tourist Use on the New Zealand Backcountry*. Research Paper No. 1. Centre for Tourism, University of Otago, Dunedin, NZ.

- **Kellert, S.R.** (1993). The biological basis for human values of nature. In: Kellert, S.R. and Wilson, E.O. (Editors). *The Biophilia Hypothesis*. pp: 42-69. Island Press, Washington DC.
- Kent, R. (2001). Data Construction and Data Analysis for Social Research. Palgrave, New York.
- Kim, S.O. and Shelby, B. (1998). Norms and behaviour and conditions in two National Park campgrounds in Korea. *Environmental Management* 22 (2): 277-285.
- **Kinnaird, M.F. and O'Brien, T.G.** (1996). Ecotourism in the Tangkoko DuaSudara Nature Reserve: opening Pandora's box? *Oryx* 30 (1): 65-73.
- Kuss, F.R. (1983). Hiking boot impacts on woodland trails. *Journal of Soil and Water Conservation* 38: 119-121.
- **Kuss, F.R.** (1986a). A review of major factors influencing plant responses to recreation impacts. *Environmental Management* 10 (5): 637-650.
- Kuss, F.R. (1986b). The effect of two hiking intensities on wildland trail wear. Proceedings of the National Wilderness Research Conference: Current Research. General Technical Report INT-212. Intermountain Forest and Range Experiment Station, Ogden, UT.
- **Kuss, F.R. and Graefe, A.R.** (1985). Effects of recreation trampling on natural area vegetation. *Journal of Leisure Research* 17 (3): 165-183.
- **Kuss, F.R. and Hall, C.N.** (1991). Ground flora trampling studies: five years after closure. *Environmental Management* 15 (5): 715-727.
- Kuss, F.R., Graefe, A.R. and Vaske, J.J. (1990). Visitor Impact Management: A Review of Research (Volume 1). National Parks and Conservation Association, Washington D.C.
- **Kyle, G., Graefe, A., Manning, R. and Bacon, J.** (2004a). Effects of place attachment on users' perceptions of social and environmental conditions in a natural setting. *Journal of Environmental Psychology* 24: 213-225.
- Kyle, G., Graefe, A., Manning, R. and Bacon, J. (2004b). Effects of activity involvement and place attachment on recreationists' perceptions of setting density. *Journal of Leisure Research* 36 (2): 209-232.
- **Laumann, K., Garling, T. and Stormark, K.M.** (2001). Rating scale measures of restorative components of environments. *Journal of Environmental Psychology* 21: 31-44.
- Law, K. (2000). Ecotourists.... who are they? Ecotourism market segmentation. In: Charters, T. and Law, K (Editors). *Best Practice Ecotourism in Queensland*. pp: 107-132. Tourism Queensland, Brisbane, QLD.

- **Leung, Y.F. and Marion, J.L.** (1996). Trail degradation as influenced by environmental factors: a state of the knowledge review. *Journal of Soil and Water Conservation* 51: 130-136.
- **Leung, Y.F. and Marion, J.L.** (2000). Recreation impacts and management in wilderness: a state-of-knowledge review. In: Cole, D.N., McCool, S.F., Boorie, W.T. and O'Loughlin, J. (Editors). *Wilderness Science in a Time of Change Conference, Missoula, MT, 5: Wilderness Ecosystems, Threats, and Management*. pp: 23-48., USDA Forest Service, Rocky Mountain Research Station, Flagstaff, AZ.
- Liddle, M.J. (1997). Recreation Ecology. Chapman and Hall, London.
- **Liddle, M.J. and Greig-Smith, P.** (1975). A survey of tracks and paths in a sand-dune ecosystem, 1: Soils. *Journal of Applied Ecology* 12: 893-908.
- **Liddle, M.J. and Thyer, N.C.** (1986). Trampling and fire in a subtropical dry sclerophyll forest. *Environmental Conservation* 13: 33-39.
- **Liddle, M.J.** (1988). Recreation and the Environment: The Ecology of Recreation Impacts. Griffiths University, Brisbane, QLD.
- Lindberg, K., Furze, B., Staff, M. and Black, R. (1998). Ecotourism in the Asia-Pacific Region: Issues and Outlook. United Nations Food and Agriculture Organisation, Rome. IT.
- Lines, K. (1999). Identifying communication and meanings in Wet Tropics of Queensland World Heritage Area visitor sites and their effect on visitor experience. Honours Thesis. James Cook University, Cairns, QLD.
- **Lipsey, M.W.** (1998). Design sensitivity: statistical power for applied experimental research. In: Bickman, L. and Rog, D.J. (Editors). *Handbook of Applied Social Research Methods*. pp: 39-68. Sage Publications, Thousand Oaks, CA.
- **Lucas, R.C.** (1990). Wilderness use and users: trends and projections. In: Hendee, J.C., Stankey, G.H. and Lucas, R.C. (Editors). *Wilderness Management*. pp: 354-398. North American Press, Golden, CO.
- Lynn, N.A. and Brown, R.D. (2003). Effects of recreational use impacts on hiking experiences in natural areas. *Landscape and Urban Planning* 64 (1): 77-87.
- Magnusson, D. and Törestad, B. (1992). The individual as an interactive agent in the environment. In Walsh, W.B., Craik, K.H. and Price, R.H. (Editors). *Person-Environment Psychology: Models and Perspectives*. pp: 89-126. Lawrence Erlbaum Associates, Hillsdale, NJ.
- Manning, R.E. (1979). Impacts of recreation on riparian soils and vegetation. *Water Resources Bulletin* 15 (1): 30-43.
- Manning, R.E. (1986). Studies in Outdoor Recreation: Search and Research for Satisfaction. Oregon State University Press, Corvallis, OR.

Manning, R.E. (2000). Coming of age: history and trends in outdoor recreation research. In: Gartner, W.C. and Lime, D.W. (Editors). *Trends in Outdoor Recreation, Leisure and Tourism*. pp: 121-130. CABI Publishing, New York.

Manning, R.E., Lime, D.W., Freimund, W.A. and Pitt, D.G. (1996). Crowding norms at frontcountry sites: a visual approach to setting standards of quality. *Leisure Sciences* 18 (1): 39-59.

Margerum, R.D. (1999). Integrated environmental management: the foundations for successful practice. *Environmental Management* 24 (2): 151-166.

Marion, J.L. and Cole, D.N. (1996). Spatial and temporal variation in soil and vegetation impacts on campsites. *Ecological Applications* 6 (2): 520-530.

Marion, J.L. and Lime, D.W. (1986). Recreational resource impacts: visitor perceptions and management responses. In: Kulhavy, D.L. and Conner, R.N. (Editors). *Wilderness and Natural Areas in the Eastern United States: A Management Challenge*. pp. 229-235. Austin State University Centre for Applied Studies, TX.

Martin, S.R., McCool, S.F. and Lucas, R.C. (1989). Wilderness campsite impacts: do managers and visitors see them the same? *Environmental Management* 13 (5): 623-629.

Mason, P. (2005). Visitor management in protected areas: from 'hard' to 'soft' approaches? *Current Issues in Tourism* 8 (2&3): 181-194.

McAndrew, F.T. (1993). *Environmental Psychology*. Brooks/Cole Publishing Company, Pacific Grove, CA.

McArthur, S. (1994). Acknowledging a symbiotic relationship – better heritage management via better visitor management. *Australian Parks and Recreation* 30 (3): 12-17.

McArthur, S. (2000). Beyond carrying capacity: introducing a model to monitor and manage visitor activity in forests. In: Font, X. and Tribe, J. (Editors). *Forest Tourism and Recreation: Case studies in environmental management*. pp: 259-278. CABI Publishing, New York.

McCool, S.F. and Patterson, M.E. (2000). Trends in recreation, tourism and protected area planning. In: Gartner, W.C. and Lime, D.W. (Editors). *Trends in Outdoor Recreation, Leisure and Tourism*. pp: 111-119. CABI Publishing, New York.

McFarlane, B.L., Boxall, P.C. and Watson, D.O. (1998). Past experience and behavioural choice among wilderness users. *Journal of Leisure Research* 30 (2): 195-214.

McNeely, J.A. and Thorsell, J.W. (1989). *Jungles, Mountains and Islands: How Tourism Can Help Conserve Natural Heritage*. International Union for Conservation of Nature and Natural Resources (IUCN), Genoa, CH.

McNeely, J.A., Thorsell, J.W. and Ceballos-Lascurain, H. (1991). Guidelines for the Development of Terrestrial and Marine National Parks and Protected Areas for Tourism. International Union for Conservation of Nature and Natural Resources (IUCN), Gland, CH

McNeely, J.A., Harrison, J. and Dingwall, P. (1994). Introduction: Protected areas in the modern world. In: McNeely, J., Harrison, J. and Dingwall, P. (Editors). *Protecting Nature: Regional Reviews of Protected Areas*. pp: 1-28. International Union for Conservation of Nature and Natural Resources (IUCN), Gland, CH.

Millward Brown Australia. (2000). Long Distance Walking – A Quantitative Study. Report commissioned by Tourism Queensland, Brisbane, QLD.

Mitchell, M. and Jolley, J. (2001). *Research Design Explained*. 4th Edition. Thomson Learning Inc. London.

Moore, S.A., Smith, A.J. and Newsome, D.N. (2003). Environmental performance reporting for natural area tourism: contributions by visitor impact management frameworks and their indicators. *Journal of Sustainable Tourism* 11 (4): 348-375.

Moorhead, D.L., Currie, W.S., Rastetter, E.B., Parton, W.J. and Harmon, M.E. (1999). Climate and litter quality controls on decomposition: an analysis of modeling approaches. *Global Biogeochemical Cycles* 13 (2): 575-589.

Morgans, D. (2000). The role of interpretation in protected area management – where does ecotourism fit in? In: Charters, T. and Law, K. (Editors). *Best Practice Ecotourism in Queensland*. pp: 167-178. Tourism Queensland, Brisbane, QLD.

Morin, R. (2005). Unconventional wisdom: a crack in the broken-windows theory. *Washington Post* 30 January 2005: B05. [Online] URL: Viewed 3 February 2006. http://www.washingtonpost.com/wp-dyn/articles/A46381

Morin, S.L., Moore, S.A. and Schmidt, W. (1997). Defining indicators and standards for recreation impacts in Nuyts Wilderness, Walpole-Nornalup National Park, Western Australia. *CALM Science* 2 (3): 247-266.

Moscardo, G. (1996). An activities based segmentation of visitors to Far North Queensland. Paper presented at the *Australian Tourism and Hospitality Research Conference*. 1996. Coffs Harbour, NSW.

Moscardo, G. (1997). Visitor satisfaction at selected WTWHA sites. Report prepared following a CRC-TREM Workshop held on 8 May 1997. Cairns, QLD.

Myers, N. (1988). Threatened biotas: 'hot spots' in tropical forests. *Environmentalist* 8: 187-208

Myers, N., Mittermeier, R.A., Mittermeier, C.G., da Fonseca, G.A.B. and Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature* 403: 853-858.

Nash, R.F. (1967). Wilderness and the American Mind. Yale University Press, New Haven, CT.

Naughton-Treves, L., Buck Holland, M. and Brandon, K. (2005). The role of protected areas in conserving biodiversity and sustaining local livelihoods. *Annual Review of Environmental Resources* 30: 219-252.

Neuman, W.L. (1997). Social Research Methods: Qualitative and Quantitative Approaches. 3rd Edition. Allyn and Bacon, Boston, MA.

Neuman, W.L. (2000). Social Research Methods: Qualitative and Quantitative Approaches. 4th Edition. Allyn and Bacon, Boston, MA.

Newsome, D., Moore, S.A. and Dowling, R.K. (2002). *Natural Area Tourism: Ecology, Impacts and Management. Aspects of Tourism 4*. Channel View Publications, Clevedon, TIK

Noe, F.P., Hammitt, W.E. and Bixler, R.D. (1997). Park user perceptions of resource and use impacts under varied situations in three National Parks. *Journal of Environmental Management* 49 (3): 323-336.

Norušis, M.J. (1996). SPSS 6.1: Guide to Data Analysis. Prentice Hall, Englewood Cliffs, NJ.

Obua, J. and Harding, D.M. (1997). Environmental impact of ecotourism in Kibale National Park, Uganda. *Journal of Sustainable Tourism* 5 (3): 213-223.

Odum, E.P. and Barrett, G.W. (2005). *Fundamentals of Ecology.* Thomson Brooks/Cole, Belmont, CA.

Orams, M.B. (1995). Using interpretation to manage nature-based tourism. *Journal of Sustainable Tourism* 4 (2): 81-94.

Owens, P.L. (1985). Conflict as a social interaction process in environment and behaviour research: the example of leisure and recreation research. *Journal of Environmental Psychology* 5: 243-259.

Pallant, J. (2005). SPSS Survival Manual. 2nd Edition. Allen & Unwin, Crows Nest, NSW.

Parks and Wildlife Service. (1998). Walking Track Management Strategy for the Tasmanian Wilderness World Heritage Area Volume 1. Parks and Wildlife Service, Department of Environment and Land Management, Hobart, TAS.

Parsons, D.J. (1985). Campsite impact data as a basis for determining wilderness use capacities. Paper presented at the *National Wilderness Research Conference July 23-26, 1985*. Fort Collins, CO.

Parsons, R. (1991). The potential influences of environmental perception on human health. *Journal of Environmental Psychology* 11: 1-24.

Pearce, P.L. and Moscardo, G. (1994). Understanding Visitor Travel Plans for, Visitor Expectations of and Visitor Reactions to the Wet Tropics World Heritage Area. Department of Tourism, James Cook University, Townsville, QLD.

Pearce, P.L. and Moscardo, G. (1998). The role of interpretation in influencing visitor satisfaction: a rainforest case study. Paper presented at the *Australian Tourism and Hospitality Research Conference*. 1998. Cairns, QLD.

Pigram, J.J. (1993). Human-nature relationships: leisure environments and natural settings. In: Gärling, T. and Golledge, R.G. (Editors). *Behaviour and Environment: Psychological and Geographical Approaches*. pp: 400-426. Elsevier Science Publishers, Amsterdam, NL.

Pimm, S.L. (1988). Energy flow and tropic structure. In: Pomeroy, L.R. and Alberts, J.J. (Editors). *Concepts of Ecosystem Ecology: A Comparative View*. pp: 263-278. Springer-Verlag, New York.

Pimm, S.L. (1991). The Balance of Nature? The University of Chicago Press, MI.

Place, S.E. (1998). How sustainable is ecotourism in Costa Rica? In: Hall, M.C. and Lew, A.A. (Editors). *Sustaiñable Tourism: A Geographical Perspective*. pp: 107-118. Longman, New York.

Pomeroy, D.E. and Service, M.W. (1986). *Tropical Ecology*. Longman Scientific and Technical, Harlow, UK.

Preece, N., Van Oosterzee, P. and James, D. (1995). Two Way Track - Biodiversity Conservation and Ecotourism: An Investigation of Linkages, Mutual Benefits and Future Opportunities. Department of the Environment, Sports and Territories, Canberra, ACT.

Prosser, G. (1986). The limits of acceptable change: an introduction to a framework for natural area planning. *Australian Parks and Recreation* 22 (2): 5-10.

Queensland Parks and Wildlife Service. (1999). Hinchinbrook Island National Park Management Plan. Queensland Parks and Wildlife Service, Brisbane, QLD.

Queensland Parks and Wildlife Service. (2001). Trail Guide: Mt Bartle Frere Trail, Wooroonooran National Park. Environmental Protection Agency, Brisbane, QLD.

Queensland Parks and Wildlife Service. (2004). *Trail Guide: Thorsborne Trail, Hinchinbrook Island National Park.* Environmental Protection Agency, Brisbane, QLD.

Quinn, N.W., Morgan, R.P.C. and Smith, A.J. (1980). Simulation of soil erosion induced by human trampling. *Journal of Environmental Management* 10: 155-165.

Ramthun, R. (1995). Factors in user group conflict between hikers and mountain bikers. *Leisure Sciences* 17 (2): 159-169.

Ravinski, Y. (1991). Private reserves, parks and ecotourism in Costa Rica. In: Whelan, T. (Editor). *Nature Tourism*. Island Press, Washington DC.

Raymont, E. (2004). Aboriginal Traditional Owner, Malanda. *Personal Communication*. 15 July 2004.

Reid, S. (1987). Working with Statistics: An Introduction to Quantitative Methods for Social Scientists. Polity Press, Cambridge, UK.

Reser, J.P. and Bentrupperbäumer, J.M. (2000). Reframing the nature and scope of social impact assessment: psychological & social (psychosocial) impacts. In: Dale, A., Taylor, N. and Lane, M. (Editors). Institutionalising Social Assessment in Resource Management. pp: 106-122. CSIRO Publications, Collingwood, VIC.

Reser, J.P. and Bentrupperbäumer, J.M. (2001). 'Social science' in the environmental studies and natural science arenas: misconceptions, misrepresentations and missed opportunities. In: Lawrence, G., Higgins, V. and Lockie, S. (Editors). *Environment, Society and Natural Resource Management: Theoretical Perspectives from Australasia and the Americas*. pp: 38-52. Edward Elgar, Cheltenham, UK.

Reser, J.P. and Bentrupperbäumer, J.M. (2005). The psychosocial impacts of visitation and use in World Heritage Areas: Researching and monitoring sustainable environments and encounters. In: Filho, W.L. (Editor). *Handbook of Sustainability Research*. Peter Lang GmbH, Frankfurt, DE.

Reser, J.P. and Scherl, L.M. (1988). Clear and unambiguous feedback: a transactional and motivational analysis of environmental challenge and self-encounter. *Journal of Environmental Psychology* 8: 269-286.

Roe, C. (2004). The Thorsborne Trail: Hinchinbrook Island. *Outdoor Australia* June/July: 40-44.

Roggenbuck, J.W. (1992). Use of persuasion to reduce resource impacts and visitor conflicts. In: Manfredo, M.J. (Editor). *Influencing Human Behavior: Theory and Applications in Recreation, Tourism, and Natural Resources Management*. pp: 149-208. Sagamore Publishing Inc, Champaign, IL.

Roggenbuck, J.W., Williams, D.R. and Watson, A.E. (1993). Defining acceptable conditions in wilderness. *Environmental Management* 17 (2): 187-197.

Ryan, C. (1991). Recreational Tourism: A Social Science Perspective. Routledge, London.

Samdahl, D.M. and Christensen, H.H. (1985). Environmental cues and vandalism: an exploratory study of picnic table carving. *Environment and Behaviour* 17: 445-458.

Schneider, I.E. and Hammitt, W.E. (1995). Visitor response to outdoor recreation conflict: a conceptual approach. *Leisure Sciences* 17 (2): 223-234.

Scherl, L.M. (1988). Constructions of a wilderness experience: using the repertory grid technique in a natural setting. *Australian Psychologist* 23 (2): 225-242.

Scherl, L.M. (1989). Self in wilderness: understanding the psychological benefits of individual-wilderness interaction through self-control. *Leisure Sciences* 11 (1): 123-135.

Scherl, L.M. (1991). Wilderness values and management. In: Goudberg, N., Bonell, M. and Benzaken, D. (Editors). *Tropical Rainforest Research in Australia: Present Status and Future Directions for the Institute for Tropical Rainforest Studies*. pp: 15-24. Institute for Tropical Rainforest Studies, Townsville, QLD.

Schreyer, R. and Roggenbuck, J.W. (1978). The influence of experience expectation on crowding perceptions and social-psychological carrying capacities. *Leisure Sciences* 1 (4): 373-394.

Seattle Police Department. (2005). The 'Broken Window' theory. [Online] URL: Viewed 7 February 2006. http://www.ci.seattle.wa.us/police/prevention/tips/broken_window.htm

Seligman, M.E.P. (1975). Helplessness. Freeman, San Francisco, CA.

Shackley, M. (1996). Wildlife Tourism. International Thompson Business Press, London.

Shelby, B. and Heberlein, T. (1984). A conceptual framework for carrying capacity determination. *Leisure Sciences* 6 (4): 433-451.

Smith, A.J. and Newsome, D. (2002). An integrated approach to assessing, managing and monitoring campsite impacts in Warren National Park, Western Australia. *Journal of Sustainable Tourism* 10 (4): 343-359.

Smith, R.A. and Turton, S.M. (1995). Environmental Impacts on Campsites and Walking Tracks in and alongside the World Heritage Daintree National Park. Wet Tropics Management Authority, Cairns, QLD.

Sop Shin,W. and Jaakson, R. (1997). Wilderness quality and visitors' wilderness attitudes: management implications. *Environmental Management* 21 (2): 225-232.

Spencer, D.M., Kim, D.K., Nelson, C.M. and Holecek, D.F. (1999). Characteristics and behaviour of tourists who use trails. *Current Issues in Tourism* 2 (2&3): 174-196.

Stankey, G.H. (1973). Visitor perceptions of wilderness carrying capacity. *United States Department of Agriculture, Forest Service Research Paper. INT – 142*. Intermountain Forest and Range Experiment Station, Ogden, UT.

Stankey, G.H. (1989). Beyond the campfire's light: historical roots of the wilderness concept. *Natural Resources Journal* 29: 9-24.

Stankey, G.H. and Lucas, R.C. (1985). Role of research in applying the limits of acceptable change system. In: *Proceedings of the Southeastern Recreation Research*

- Conference 1985. Department of Recreation and Leisure Services, Georgian Southern College, GA.
- Stankey, G.H., Cole, D.N., Lucas, R.C., Petersen, M.E. and Frissell, S.S. (1985). The limits of acceptable change (LAC) system for wilderness planning. *United States Department of Agriculture, Forest Service Research Paper. INT 176*. Intermountain Forest and Range Experiment Station, Ogden, UT.
- Stankey, G.H., McCool, S.F. and Stokes, G.L. (1990). Managing for appropriate wilderness conditions: the carrying capacity issue. In: Hendee, J.C., Stankey, G.H. and Lucas, R.C. (Editors). *Wilderness Management*. pp: 215-239. North American Press, Golden, CO.
- **Stanton, J.P. and Godwin, M.D.** (1989). Report on the conservation status of the remaining habitats of the wet tropical lowlands of Queensland. Internal report to the Queensland National Parks and Wildlife Service, Cairns, QLD.
- **Stephenson, P.J.** (1993). The impacts of tourism on nature reserves in Madagascar: Périnet: a case study. *Environmental Conservation* 20 (3): 262-265.
- **Stokols, D.** (1976). The experience of crowding in primary and secondary environments. *Environment and Behaviour* 8: 49-86.
- **Stokols, D.** (1979). A congruence analysis of human stress. In: Sarason, I.G. and Spielberger, C.D. (Editors). *Stress and Anxiety*. Volume 6. pp: 27-53. John Wiley & Sons, New York.
- **Strang, V.** (1996). Sustaining tourism in far north Queensland. In: Price, M.F. (Editor). *People and Tourism in Fragile Environments*. pp: 51-67. Royal Geographical Society and John Wiley & Sons, Chichester, UK.
- **Sun, D.** (1991). Plant resistance to and recovery from trampling of four grasses and soil fertility. *Journal of Australian Parks and Recreation* 27: 28-33.
- Sun, D. and Liddle, M.J. (1991). Field occurrence, recovery and simulated trampling resistance and recovery of two grasses. *Biological Conservation* 57: 187-203.
- Sun, D. and Liddle, M.J. (1993a). Plant morphological characteristics and resistance to simulated trampling. *Environmental Management* 17 (4): 511-521.
- Sun, D. and Liddle, M.J. (1993b). A survey of trampling effects on vegetation and soil in eight tropical and subtropical sites. *Environmental Management* 17 (4): 497-510.
- Sun, D. and Liddle, M.J. (1993c). The morphological responses of some Australian tussock grasses and the importance of tiller number in their resistance to trampling. *Biological Conservation* 65: 43-49.
- Sun, D. and Liddle, M.J. (1993d). Trampling resistance, stem flexibility and leaf strength in nine Australian grasses and herbs. *Biological Conservation* 65: 35-41.

Sun, D. and Walsh, D. (1998). Review of studies on environmental impacts of recreation and tourism in Australia. *Journal of Environmental Management* 53: 323-338.

Sutherland, R.A., Bussen, J.O., Plondke, D.L., Evans, B.M. and Ziegler, A.D. (2001). Hydrophysical degradation associated with hiking trail use: a case study of Hawai 'iloa Ridge Trail, O'ahu, Hawai'i. *Land Degradation & Development* 12: 71-86.

Swearingen, T.C. and Johnson, D.R. (1995). Visitors' Responses to Uniformed Park Employees. *Journal of Park and Recreation Administration* 13 (1): 73-85.

Tabachnick, B.G. and Fidell, L.S. (2001). *Using Multivariate Statistics.* 4th *Edition.* Harper Collins Publishers, New York.

Talbot, J.F. and Kaplan, S. (1986). Perspectives on wilderness: re-examining the value of extended wilderness experiences. *Journal of Environmental Psychology* 6: 177-188.

Talbot, L.M. (2001). The baseline conditions and potential ecological impacts of walking tracks proposed in the Misty Mountain Trails Project. Honours Thesis. James Cook University, Cairns, QLD.

Talbot, L.M., Turton, S.M. and Graham, A.W. (2003). Trampling resistance of tropical rainforest soils and vegetation in the wet tropics of north east Australia. *Journal of Environmental Management* 69: 63-69.

Tarrant, M.A., Cordell, H.K. and Kibler, T.L. (1997). Measuring perceived crowding for high-density river recreation: the effects of situational conditions and personal factors. *Leisure Sciences* 19 (1): 97-112.

Thorsborne, A.S. and Thorsborne, M.G. (1988). Hinchinbrook Island: The Land That Time Forgot. Weldons Pty Ltd, Sydney, NSW.

Tinsley, **B.E. and Fish**, **E.B.** (1985). Evaluation of trail erosion in Guadalupe Mountains National Park, Texas. *Landscape Planning* 12: 29-47.

Tribe, J., Font, X., Griffiths, N., Vickery, R. and Yale, K. (2000). *Environmental Management for Rural Tourism and Recreation*. Cassell Publications, London.

Turton, S.M. (1991). Solar radiation regimes in rainforest understoreys, gaps and clearings: with special reference to northeast Queensland. PhD Thesis. James Cook University, Townsville, QLD.

Turton, S.M. (1993). The Sky Canopy Gap Irradiance (SCANGIR) Model: a technique for the estimation of 'effective gap' solar radiation regimes in closed-canopy forests. *Australian Geographical Studies* 31 (2): 155-176.

Turton, S.M. (2005). Managing environmental impacts of recreation and tourism in rainforests of the Wet Tropics of Queensland World Heritage Area. *Geographical Research* 43 (2): 140-151.

- **Turton, S.M. and Stork, N.E.** (2006). Tourism and Tropical Rainforests: Opportunity or Threat? In: Laurence, W.F. and Peres, C.A. (Editors). *Emerging Threats to Tropical Forests*. University of Chicago Press, MI.
- Turton, S.M., Hutchinson, M.F, Accad, A., Hancock, P.E. and Webb, T. (1999). Producing fine-scale rainfall climatology surfaces for Queensland's wet tropics region. In: Kesby, J.A., Stanley, J.M., McLean, R.F. and Olive, L.J. (Editors). *Geodiversity: Readings in Australian Geography at the close of the 20th Century.* pp. 415-428. Special Publication Series No. 6, School of Geography and Oceanography, University College, ADFA, Canberra, ACT.
- **Turton, S.M., Kluck, T. and Day, T.J.** (2000a). Ecological impacts of recreation along walking tracks. In: Bentrupperbäumer, J and Reser, J. (Editors). *Impacts of Visitation and Use: Psychosocial and Biophysical Windows on Visitation and Use in the Wet Tropics World Heritage Area.* pp: 135-142. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.
- Turton, S.M., Kluck, T. and Day, T.J. (2000b). Ecological impacts of visitors at dayuse and camping areas. In: Bentrupperbäumer, J and Reser, J. (Editors). *Impacts of Visitation and Use: Psychosocial and Biophysical Windows on Visitation and Use in the Wet Tropics World Heritage Area.* pp: 123-134. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.
- **Ulrich, R.S.** (1979). Visual landscapes and psychological well-being. *Landscape Research* 4: 17-23.
- **Ulrich, R.S.** (1984). View through a window may influence recovery from surgery. *Science* 224: 420-421.
- **Ulrich, R.S.** (1993). Biophilia, biophobia and natural landscapes. In: Kellert, S.R. and Wilson, E.O. (Editors). *The Biophilia Hypothesis*. pp: 73-137. Island Press, Washington DC.
- Ulrich, R.S., Simons, R., Tosito, B., Fiorito, E., Miles, M. and Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology* 11: 201-230.
- United Nations Educational, Scientific and Cultural Organisation. (2004). Home Page. [Online] URL: Viewed 11 December 2004. http://whc.unesco.org
- **Valentine, P.S.** (1992). Review: Nature-based Tourism. In: Weiler, B. and Hall, C.M. (Editors). *Special Interest Tourism*. pp: 105-127. Belhaven Press, London.
- Valentine, P.S. (1994). Hinchinbrook Area World Heritage Values and the Oyster Point Proposal. A Report to the Department of the Environment, Sports and Territories. James Cook University, Townsville, QLD.

Valentine, P.S. and Cassells, D.S. (1991). Recreation management issues in tropical rainforests. In: Goudberg, N., Bonell, M. and Benzaken, D. (Editors). *Tropical Rainforest Research in Australia: Present Status and Future Directions for the Institute for Tropical Rainforest Studies*. pp: 9-14. Institute for Tropical Rainforest Studies, Townsville, QLD.

Van der Post, L. (1982). Wilderness and the human spirit. In: Martin, V. (Editor). *Wilderness*. pp: 66-71. The Findhorn Press, Findhorn, SC.

Vaske, J.J., Donnelly, M.P. and Heberlein, T.A. (1980). Perceptions of crowding and resource quality by early and more recent visitors. *Leisure Sciences* 3 (4): 367-381.

Veitch, R. and Arkkelin, D. (1995). Environmental Psychology: An Interdisciplinary Perspective. Prentice Hall, Englewood Cliffs, NJ.

Verderber, S. (1986). Dimensions of person-window transactions in the hospital environment. *Environment and Behaviour* 18: 450-466.

Vincent, M.A. and Fazio, R.H. (1992). Attitude accessibility and its consequences for judgment and behavior. In: Manfredo, M.J. (Editor). *Influencing Human Behavior: Theory and Applications in Recreation, Tourism, and Natural Resources Management.* pp: 51-75. Sagamore Publishing Inc, Champaign, IL.

Virden, R.J. and Knopf, R.C. (1989). Activities, experiences and environmental settings: a case study of recreational opportunity spectrum relationships. *Leisure Science* 11: 159-176.

Vittersø, J., Vorkinn, M., Vistad, O. and Vaagland, J. (2000). Tourist experiences and attractions. *Annals of Tourism Research* 27 (2): 432-450.

Walker, J. and Hopkins, M.S. (1998). Vegetation. In: McDonald, R.C, Isbell, R.F., Speight, J.G., Walker, J. and Hopkins, M.S. (Editors). *Australian Soil and Land Survey Field Handbook*. 2nd Edition. pp: 58-86. Australian Collaborative Land Evaluation Program, CSIRO Land and Water, Canberra, ACT.

Wallin, T.R. and Harden, C. P. (1996). Estimating trail related soil erosion in the humid tropics: Jatun Sacha, Ecuador, and La Selva, Costa Rica. *Ambio* 25 (8): 517-522.

Walsh, W.B., Craik, K.H. and Price, R.H. (Editors). (1992). Person-Environment Psychology: Models and Perspectives. Lawrence Erlbaum Associates, Hillsdale, NJ.

Wapner, S., Demick, J., Yamamoto, T. and Minami, H. (Editors). (2000). Theoretical Perspectives in Environment-Behaviour Research: Underlying Assumptions, Research Problems, and Methodologies. Plenum, New York.

Ward, J., Hughey, K. and Urlich, S. (2002). A framework for managing the biophysical effects of tourism on the natural environment in New Zealand. *Journal of Sustainable Tourism* 10 (3): 239-258.

Wearing, S. and Larsen, L. (1996). Assessing and managing the sociocultural impacts of ecotourism: revisiting the Santa Elena rainforest project. *The Environmentalist* 16: 117-133.

Weaver, T. and Dale, D. (1978). Trampling effects of hikers, motorcycles and horses in meadows and forests. *Journal of Applied Ecology* 15: 451-457.

Weaver, T., Dale, D. and Hartley, E. (1979). The relationship of trail condition to use, vegetation, user, slope, season and time. In: Ittner, R., Potter, D., Agee, J. and Anschell, S. (Editors). *Recreational Impact on Wildlands*. US Forest Service, PNW-R6-001.

Webb, W.M. and Worchel, S. (1993). Prior experience and expectation in the context of crowding. *Journal of Personality and Social Psychology* 65: 512-521.

Werner, C.M. and Altman, I. (2000). Humans and nature: insights from a transactional view. In: Wapner, S., Demick, J., Yamamoto, T. and Minami, H. (Editors). *Theoretical Perspectives in Environment-Behaviour Research: Underlying Assumptions, Research Problems, and Methodologies*. Plenum, New York.

Wet Tropics Management Authority. (1992). Building, Siting and Design Guidelines. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (1996). Wet Tropics in Profile: A Reference Guide to the Wet Tropics Region of Queensland World Heritage Area. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (1997). Protection through Partnerships: Policies for Implementation of the Wet Tropics Plan. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (2000). Wet Tropics Nature Based Tourism Strategy. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (2001). Wet Tropics Walking Strategy. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (2003). Wet Tropics Management Authority Annual Report 2002-2003. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (2004a). Wet Tropics Conservation Strategy: The Conservation, Rehabilitation and Transmission to Future Generations of the Wet Tropics World Heritage Area. Wet Tropics Management Authority, Cairns, QLD.

Wet Tropics Management Authority. (2004b). Things to Do: Places, Walks and Drives in the Wet Tropics area. [Online] URL: Viewed 28 October 2004. http://www.wettropics.gov.au/ttd/ttd_list.asp

Wet Tropics World Heritage Protection and Management Act 1993. Act No. 50 of 1993, OLD.

Whinam, J. and Chilcott, N. (1999). Impacts of trampling on alpine environments in central Tasmania. *Journal of Environmental Management* 57: 205-220.

White, D., Hall, T. and Farrell, T. (2001). Influence of ecological impacts and other campsite characteristics on wilderness visitors' campsite choices. *Journal of Park and Recreation Administration* 19 (2): 83-97.

Whitmore, T.C. (1975). Tropical Rainforests of the Far East. Oxford Science Publications, Oxford.

Whitmore, T.C. (1990). An Introduction to Tropical Rainforests. Oxford University Press.

Wight, P. (1998). Tools for sustainability analysis in planning and managing tourism and recreation in the destination. In: Hall, M.C. and Lew, A.A. (Editors). *Sustainable Tourism: A Geographical Perspective*. pp: 75-91. Longman, New York.

Williams, D.R. and Vaske, J.J. (2003). The measurement of place attachment: validity and generalizability of a psychometric approach. *Forest Science* 49: 830-840.

Willmott, W.F. and Stephenson, P.J. (1989). Rocks and Landscapes of the Cairns District. Queensland Government Printer, Brisbane, QLD.

Wilson, E.O. (1984). Biophilia. Harvard University Press, Cambridge, MA.

Wilson, E.O. (1993). Biophilia and the conservation ethic. In: Kellert, S.R. and Wilson, E.O. (Editors). *The Biophilia Hypothesis*. pp: 31-41. Island Press, Washington DC.

Wilson, R.F., Turton, S.M., Bentrupperbäumer, J.M. and Reser, J.P. (2004a). Visitor Monitoring System for the Wet Tropics World Heritage Area Volume 1: Procedural Manual. Wet Tropics Management Authority and Rainforest CRC, Cairns, OLD.

Wilson, R.F., Turton, S.M., Bentrupperbäumer, J.M. and Reser, J.P. (2004b). Visitor Monitoring System for the Wet Tropics World Heritage Area Volume 2: Case Studies – Biophysical Assessment. Wet Tropics Management Authority and Rainforest CRC, Cairns, QLD.

Wong, P.P. (2004). Environmental impacts of tourism. In: Lew, A.A., Hall, M.C. and Williams, A.M. (Editors). *A Companion to Tourism*. pp: 450-461. Blackwell Publishing, Oxford.

Worboys, S.J. and Gadek, P.A. (2004). Rainforest dieback: risks associated with roads and walking track access in the Wet Tropics World Heritage Area. Cooperative Research Centre for Tropical Rainforest Ecology and Management, James Cook University, Cairns, QLD.

Worboys, G., Lockwood, M. and De Lacy, T. (2005). Protected Area Management: Principles and Practice. 2nd Edition. Oxford University Press, South Melbourne, VIC.

Young, N.G. (1994). Spatial and temporal variations in microclimate regimes associated with a large canopy gap in an upland tropical rainforest in northeastern Queensland. Honours Thesis. James Cook University, Cairns, QLD.

Zar, J.H. (1984). *Biostatical Analysis*. 2nd Edition. Prentice Hall, Upper Saddle River, NI





