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Nota di contenuto	Hydroecology and Ecohydrology: Past, Present and Future; Contents; List of Contributors; Preface; 1: Ecohydrology and Hydroecology: An Introduction; 1.1 Wider Context; 1.2 Hydroecology and Ecohydrology: A Brief Retrospective; 1.3 A Focus; 1.4 This Book; 1.5 Final Opening Remarks; References; PART I: PROCESSES AND RESPONSES; 2: How Trees Influence the Hydrological Cycle in Forest Ecosystems; 2.1 Introduction; 2.2 Key Processes and Concepts in Evapotranspiration - Their Historical Development and Current Status; 2.2.1 The SPAC; 2.2.2 Transpiration 2.2.3 Liquid Water Transport through Trees and the Role of Hydraulic Architecture 2.2.4 Water Uptake by Roots; 2.3 Evapotranspiration in Forest Ecosystems; 2.3.1 Evaporation and Transpiration; 2.3.2 Transpiration from the Understory; 2.4 Applying Concepts: Changes in Hydrologic Processes through the Life Cycle of Forests; 2.4.1 A Summary of Age-related Changes in Forest Composition, Structure, and Function; 2.4.2 Impacts of Tree Size on Stomatal Conductance and Whole-tree Water Use; 2.4.3 Age-related Change in Transpiration,

Interception and Water Storage on the Forest Stand Level

2.4.4 Impacts of Change in Species Composition on Transpiration in Aging Forests
2.4.5 Implications for Predictive Models;

Acknowledgments; References; 3: The Ecohydrology of Invertebrates Associated with Exposed Riverine Sediments; 3.1 Introduction; 3.2 ERS Habitats; 3.3 Invertebrate Conservation and ERS Habitats; 3.4 Flow Disturbance in ERS Habitats; 3.5 The Importance of Flow Disturbance for ERS Invertebrate Ecology; 3.5.1 Principle (i): Physical Variability and ERS Invertebrates; 3.5.2 Principle (ii): Life History Patterns and Function Ecology

3.5.3 Principle (iii): Lateral and Longitudinal Connectivity and Population Viability
3.6 How Much Disturbance is Needed to Sustain ERS Diversity?; 3.7 Threats to ERS Invertebrate Biodiversity; 3.8 Conclusions;

References; 4: Aquatic-Terrestrial Subsidies Along River Corridors; 4.1 Introduction; 4.2 What Controls Aquatic-Terrestrial Flows?; 4.2.1

Subsidies from Land to Water; 4.2.2 Subsidies from Water to Land; 4.3 Aquatic-Terrestrial Flows Along River Corridors; 4.3.1 Aquatic-Terrestrial Subsidies in Forested Headwater Streams; 4.3.2 Aquatic-Terrestrial Subsidies in a Braided River Reach

4.3.3 Aquatic-Terrestrial Subsidies in Temperate Lowland Rivers
4.4 Influence of Human Impacts on Aquatic-Terrestrial Subsidies; 4.4.1

Riparian Deforestation; 4.4.2 River Channelization and Regulation; 4.5 Conclusions; 4.6 Future Research; References; 5: Flow-generated

Disturbances and Ecological Responses: Floods and Droughts; 5.1 Introduction; 5.2 Definition of Disturbance; 5.3 Disturbances and Responses; 5.4 Disturbance and Refugia; 5.5 Floods; 5.5.1 The

Disturbance; 5.6 Droughts; 5.6.1 The Disturbance; 5.7 The Responses to Floods; 5.7.1 Constrained Streams; 5.7.2 Floodplain Rivers

5.8 Responses to Drought

Sommario/riassunto

This state-of-the-art, research level text considers the growing volume of research at the interface of hydrology and ecology and focuses on: the evolution of hydroecology / ecohydrology process understanding hydroecological interactions, dynamics and linkages methodological approaches detailed case studies future research needs The editors and contributors are internationally recognised experts in hydrology and ecology from institutions across North America, South America, Australia, and Europe.
