



## CURRICULUM VITAE THOMAS L. THUROW

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### EDUCATION

- 1985 Ph.D. Rangeland Ecology and Management  
Texas A&M University, College Station, Texas
- 1979 M.S. Zoology  
Brigham Young University, Provo, Utah
- 1977 B.S. Wildlife Management  
University of Idaho, Moscow, Idaho

### PROFESSIONAL EXPERIENCE

- 4/05 - present **Professor**, Department of Renewable Resources, University of Wyoming  
Annually teach "Introduction to Forest Management", "Wildland Watershed Management", "Ecological Applications for Wildland Management" and "Environment and Natural Resources Problems and Policies". Conduct research on watershed management and restoration ecology.
- 7/99 - 3/05 **Professor and Head**, Department of Renewable Resources, University of Wyoming  
Administered a department comprised of 24 tenured/tenure-track faculty, 16 staff, 150 undergraduate students, and 60 graduate students; annual operating and salary budget totaled \$1.9 million; department grants & contracts averaged \$7.2 million. The department grew dramatically during this period (e.g., net gain of 5 faculty, 50 undergraduate students, 25 graduate students). The Department is a multi-disciplinary group of rangeland and forest scientists, hydrologists, soil scientists, and entomologists with a shared focus in applied ecology. Annually taught an undergraduate course "Introduction to Forest Management" and in alternating years co-taught a graduate course "Wildland Hydrology".
- 9/93 - 6/99 **Associate Professor**, Department of Rangeland Ecology and Management, Texas A&M University

- 7/88 - 8/93 **Assistant Professor**, Department of Rangeland Ecology and Management, Texas A&M University  
Taught two to three courses per year: "Range and Forest Watershed Management" (every year), "Environmental Impact Assessment" or "Agroforestry" (alternating years), and a graduate seminar, "International Natural Resource Management" (alternating years). Conducted research on watershed management, wildland hydrologic processes, agroforestry, and agropastoralism. My research program involved managing expenditures of \$3.7 million in conjunction with total grants and contracts of \$5.5 million that I was directly affiliated with. Primary funding sources were US Departments of Interior, Agriculture, and Defense, US Environmental Protection Agency, US Agency for International Development, the German government's development organization (GTZ), World Bank, and the Asian Development Bank.
- 5/85 - 7/88 **Scientist and Manager**, Somalia  
World Bank/USAID's Central Rangeland Development Project  
Conducted research in support of the Somali National Range Agency (50% of my appointment). Research focused on range and forest assessment, monitoring, management, and reclamation. Helped establish a Department of Botany and Range Science at the Somali National University (50% of my appointment). Taught classes and developed workbooks for courses in Rangeland Assessment Techniques, Wildlife Management, Strategies of Pastoralism, and Rangeland Rehabilitation. Aided development of curriculum goals for the department; founded and edited the *Somali Journal of Range Science*; and served as an adjunct professor and graduate advisor for students from Utah State University; Colorado State University; Oxford University, United Kingdom; Uppsala University, Sweden.
- 9/82 - 5/85 **Teaching and Research Assistant**, Department of Rangeland Ecology & Management, Texas A&M University  
Conducted research on rangeland hydrology processes affected by grazing. Taught the laboratory component of a Range and Forest Watershed Management course.
- 10/79 - 8/82 **Environmental Scientist**, Idaho National Engineering Laboratory (INEL), Idaho Falls  
U.S. Department of Energy - Alternate Energy Division, Environmental Programs  
Provided technical direction and support for the natural resource aspects of alternate energy programs administered by the INEL. Developed new research programs in addition to maintaining project commitments with respect to environmental impact assessment (in particular, threatened and endangered species compliance) and site management (mainly reclamation).

9/77 -9/79

**Teaching and Research Assistant**, Brigham Young University

During the northern hemisphere winters, conducted research on two raptors in southern Africa (bat hawk and gymnogene -- funded by the National Geographic Society and the New York Zoological Society) and conducted research on arboreal faunal biodiversity at Smithsonian Tropical Research Station, Panama. During the northern hemisphere summers, conducted research to develop buffer zone standards required to protect Ferruginous Hawk nesting activities and established a monitoring program for avian biodiversity for Betatakin Canyon in the newly created Navajo National Monument.

5/76 - 8/77

**Research Assistant**, University of Idaho Wilderness Research Station.

During two summers conducted a survey of small mammal distributions throughout the newly established Frank Church River-of-No-Return Wilderness area and adjacent portions of central Idaho; mapped raptor nesting sites throughout the Big Creek drainage of the Wilderness Area; and helped with the ongoing telemetry and habitat assessment studies of Bighorn Sheep.

## HONORS AND AWARDS

University of Wyoming Range Management Club Outstanding Service Award (2005)

Society for Range Management (Wyoming Section) Trail Boss Leadership Award (2004)

Undergraduate Teacher of the Year (1999, first recipient) - Rangeland Ecology & Management Dept.,  
Texas A&M University

Texas A&M University=s International Excellence Award (1999)

Blue Quill Award (1999) - Environmental Consulting Organizations= Award for Best Scientific Publication

Society of Range Management (Texas Section) Award for Best Scientific Publication (1998 & 2000)

Texas A&M University Vice-Chancellor Team Research Award (1997)

Texas A&M University Neuhaus Teaching Scholar Award (1997)

W.G. Mills Memorial Fellowship in Hydrology (1984)

New York Zoological Society Chapman Research Fellowship (1978)

Titus Fellowship in Conservation (1976)

## ON-CAMPUS SERVICE AND LEADERSHIP (partial list)

### Graduate Committee Service

#### Completed programs:

**Chair:** 5 Ph.D., 15 M.S. (20 = Rangeland Ecology & Watershed Management)

**Member:** 30 Ph.D., 45 M.S. (17 = Rangeland Ecology & Watershed Management; 17 = Wildlife & Fisheries Science; 14 = Soil & Crops Science; 7 = Forest Science; 7 = Agricultural Education; 2 = Agricultural Engineering; 2 = Geography; 2 = Landscape Architecture & Urban Planning; 2 = Agricultural Economics; 1 = Statistics; 1 = Adult Education; 1 = Public Administration; 1 = Atmospheric Sciences; 1 = Mechanical Engineering).

#### Current programs:

**Chair:** 2 M.S., 1 Ph.D.

**Member:** 4 Ph.D., 4 M.S.

### **University-level Committees - University of Wyoming**

**Member**, Life Sciences Committee (2004-2006)

**Member**, Earth Sciences Committee (2004-2005)

**Co-Chair**, Reclamation and Restoration Ecology Center Task Force (2001-2003)

**Chair**, Search Committee, Dean of the College of Agriculture (2001)

**Member**, Institute of Environment and Natural Resources Coordinating Committee (1999-2004)

**Member**, Faculty Senate (1999 - 2002)

**Member**, Spatial Data Visualization Center Task Force (1999-2001)

### **University-level Committees - Texas A&M University**

**Chair**, Organization for Tropical Studies (1990-94)

**Member**, Edwards Aquifer Task Force (1994-95)

**Member**, Conservation and Sustainable Development Task Force (1989-90)

**Faculty advisor**, Texas A&M University students= Overseas Development Network (1997-99)

### **Departmental and College-level Committees**

**Chair** (2) or **Member** (5) of department head search committees

**Chair** (4) or **Member** (13) of faculty search

**Coordinator**, University of Wyoming Forest Resources minor program (2006 - present).

**Adjunct Faculty Member**: School of Environment & Natural Resources, University of Wyoming  
Water Resources Graduate Faculty, University of Wyoming

**Member** 1993-1999 Rangeland Ecology and Management Tenure and Promotion committee at TAMU; as Head of the Renewable Resources Department at UW (1999-2005) I was a component of all aspects of annual review, tenure, and promotion decisions of all personnel associated with the department.

**Member** of both graduate and undergraduate curriculum committees for the Department of Rangeland Ecology and Management at TAMU and worked to establish similar committees for the Department of Renewable Resources and the Department of Plant Sciences at UW resulting in the implementation of updated undergraduate course content and requirements in Range Ecology and Watershed Management and in Agroecology degrees.

## **OFF-CAMPUS SERVICE AND LEADERSHIP (partial list)**

### **U.S. Department of State, Agency for International Development**

**Team Leader** B External Evaluation Panel of the Global Livestock - Collaborative Research Support Program (2002)

**Member** - External Evaluation Panel of the Sustainable Agriculture & Natural Resource Management - Collaborative Research Support Program (1997-2004) and proposal review panel (2005)

**Member** - Technical Committee of Soil Management B Collaborative Resource Support Program (1997-2000)

## **U.S. Department of Agriculture**

**Member** - Natural Resources Conservation Service Conservation Effects Assessment Program (2007 - present)

**Member** - Agriculture Research Service review of national range and pasture research programs (2007)

**Member** - Agriculture Research Service review of national water quality and management research programs (2005)

**Member** - National Research Initiative, Managed Ecosystems Panel (2005)

**Administrative Advisor** - Western Coordinating Committee on Revegetation and Stabilization of Deteriorated and Altered Lands (2001-2005)

**Member** - High Plains Agriculture Research Service Advisory Board (2000-present)

**Member** - Northwest Watershed Research Center, Agriculture Research Service Evaluation Team (1996)

## **State of Wyoming**

**Member** - Governor's Drought Policy Task Force (2002-present)

**Member** - Department of Environmental Quality Forestry Best Management Practices Coordinating Committee (2000-present)

## **International Livestock Research Institute (ILRI)**

**Member** - Board of Science Advisors (2009-present)

## **German Development Organization (GTZ)**

Reviewed natural resource management projects throughout Kenya (1992-1996)

## **International Union for Conservation of Nature (IUCN)**

**Member** - Antelope Specialist Group (1995-2002)

## **National Audubon Society - Wyoming Section**

**Member** - Conservation Committee (2003 - present)

## **Society for Range Management**

### **National**

**Chair**, Accreditation Task Force (2004 - 2006)

**Chair** (1997) & **Member** International Committee (1992 - 1997)

**Member**, Riparian Committee (1992 - 1994)

### **Wyoming Section**

**Member**, Board of Directors, Wyoming Section, 2003-2005

### **Texas Section**

**Chair** or **member** of a variety of state committees (e.g., scholarship committee, research committee 1988-1999)

## **National Association of State Universities and Land-Grant Colleges (NASULGC)**

**Member** - Board on Natural Resources (2001 - present)

**Member** - Steering Committee for International Conference on Water Policy 2009 hosted by NASULGC and the Association for European Life Science Universities

## **National Association of University Forest Resource Programs**

**Member** - University of Wyoming representative (2003 - present)

## **National Association of University Rangeland Resource Programs**

**Chair** - University of Wyoming representative (2004 - 2006)

## **PUBLICATIONS**

45 Refereed journal articles

16 Book chapters

15 Government/International Agency publications

15 University publications

28 Proceedings papers (15 invited)

91 Published abstracts (38 invited)

## **Refereed Journal Articles**

Oradottir, B., S.R. Archer, O. Arnalds, L.P. Wilding and **T.L. Thurow**. 2008. Infiltration in Icelandic Andisols: The role of vegetation and soil frost. *Journal of Arctic, Antarctic and Alpine Research*. 40 (2): 412-421

**Thurow, T.L.**, M.M. Kothmann, J.A. Tanaka and J.P. Dobrowolski. 2007. Which direction is forward: Perspectives on rangeland science curricula. *Rangelands*. 29 (6): 40-51.

Cheruiyot, S.K., **T.L. Thurow** and D.K. Too. 2007. Range science leadership development in Kenya: A continuing legacy of graduate education. *Rangelands*. 29 (4):49-52.

Wilcox, B.P., S.L. Dowhower, W.R. Teague and **T.L. Thurow**. 2006 Long-term water balance in a semiarid shrubland. *Rangeland Ecology and Management*. 59 (6): 600-606.

Wilcox, B.P. and **T.L. Thurow**. 2006. Emerging issues in rangeland ecohydrology. *Hydrologic Processes*. 20 (15): 3155-3157. Co-editors of Hydrologic Processes special issue on rangeland ecohydrology 20 (15):3155-3411.

Wilcox, B.P. and **T.L. Thurow**. 2006. Emerging issues in rangeland ecohydrology: vegetation change and the water cycle. *Rangeland Ecology and Management*. 59 (2): 220-224.

Thurow, A.P., **T.L. Thurow**, and H.E. Santos. 2004. Considerations for targeting soil conservation investments in southern Honduras. *Environment and Development Economics*. 9 (6): 781-802.

- Perotto-Baldivieso, H.L., **T.L. Thurow**, C.T. Smith, R.F. Fisher, and X.B. Wu. 2004. GIS-based spatial analysis and modeling for landslide hazard assessment in steeplands, southern Honduras. *Agriculture, Ecosystems and the Environment*. 103 (1):165-176.
- Thurow, T.L.**, A.P. Thurow, X.B. Wu, and H. Perotto-Baldivieso. 2002. How to target soil conservation investments in tropical steeplands. *Choices*. 17 (3):20-25.
- Brown, J.R., T. Svejcar, M. Brunson, J. Dobrowolski, E. Fredrickson, U. Krueter, K. Launchbaugh, J. Southworth and **T. Thurow**. 2002. Range sites: Are they the appropriate spatial unit for measuring and managing rangelands? *Rangelands*. 24 (6): 7-12.
- Thurow, T.L.** 2001. Water management: The range profession's most compelling challenge for the 21<sup>st</sup> century. *Rangelands*. 23: 36-38.
- Thurow, A.P., J.R. Conner, **T.L. Thurow**, and M.D. Garriga. 2001. A preliminary analysis of Texas ranchers' willingness to participate in a brush control cost-sharing program to improve off-site water yields. *Ecological Economics*. 37:137-150.
- Wu, X.B., E.J. Redeker and **T.L. Thurow**. 2001. Vegetation and water yield dynamics in an Edwards Plateau watershed. *Journal of Range Management*. 54:98-105.
- Wu, X.B., **T.L. Thurow** and S.G. Whisenant. 2000. Fragmentation and changes in hydrologic function of tiger bush landscapes, south-west Niger. *Journal of Ecology*. 88:790-800.
- Thurow, T.L.**, A.P. Thurow and M.D. Garriga. 2000. Policy prospects for brush control to increase off-site water yields. *Journal of Range Management*. 53:23-31.
- Thurow, T.L.** and C.A. Taylor, Jr. 1999. Viewpoint: The role of drought in range management. *Journal of Range Management*. 52: 413-419.
- East, R., and **T.L. Thurow**. 1999. Challenges to traditional *Hygenia abyssinica* agroforestry in Tanzania's southern highlands. *Agroforestry Today*. 11:8-10.
- Redeker, E.J., **T.L. Thurow**, and X.B. Wu. 1998. Brush management on the Cusenbary Draw watershed: history and ramifications. *Rangelands*. 20 (5):12-14.
- Yoder, C.K., T.W. Boutton, **T.L. Thurow**, and A.J. Midwood. 1998. Differences in soil water use by annual broomweed and grasses. *Journal of Range Management*. 51:200-206.
- Hester, J.W., **T.L. Thurow**, and C.A. Taylor, Jr. 1997. Hydrologic characteristics of vegetation types as affected by prescribed burning. *Journal of Range Management*. 50:199-204.
- Carlson, D.H. and **T.L. Thurow**. 1996. Comprehensive evaluation of the improved SPUR model (SPUR-91). *Ecological Modeling*. 85:229-240.

- Yoder, C.L., **T.L. Thurow**, D.H. Carlson, and B.L. Caesar. 1995. Root distribution patterns of common curly mesquite and side-oats grama on two rangeland sites in Texas. *Southwestern Naturalist*. 40:273-280.
- Whisenant, S.G., **T.L. Thurow**, and S.J. Maranz. 1995. Initiating autogenic restoration on shallow, semi-arid sites. *Restoration Ecology*. 3:61-67.
- Herlocker, D.J., S.B. Shaabani, and **T.L. Thurow**. 1994. Geographic information system as an aid to rangeland management in Kenya. *Rangelands*. 16:245-246.
- Thurow, T.L.**, S.D. Warren, D.H. Carlson. 1993. Tracked vehicle traffic effects on the hydrologic characteristics of central Texas rangeland. *Transactions of the American Society of Agricultural Engineers*. 36:1645-1650.
- Elmi, A.A., **T.L. Thurow** and T.W. Box. 1992. Composition of camel diets in central Somalia. *Nomadic Peoples*. 31:51-62.
- Ziehm, R.W., H.A. Pearson, **T.L. Thurow**, and V.C. Baldwin. 1992. Pine growth response to management of the subterranean clover understory. *Agroforestry Systems*. 20:267-274.
- Blackburn, W.H., F.B. Pierson, C.L. Hanson, **T.L. Thurow**, and A.L. Hanson. 1992. Spatial and temporal influence of vegetation on surface soil factors of semiarid rangelands. *Transactions of the American Society of Agricultural Engineers*. 35:479-486.
- Barker, J.R., **T.L. Thurow**, and D.J. Herlocker. 1990. Vegetation of pastoralist campsites within the coastal grassland of central Somalia. *African Journal of Ecology*. 28:291-297.
- Carlson, D.H., **T.L. Thurow**, R.W. Knight, and R.K. Heitschmidt. 1990. Effect of honey mesquite on the water balance of Texas Rolling Plains rangeland. *Journal of Range Management*. 43:491-496.
- Takar, A.A., J.P. Dobrowolski, and **T.L. Thurow**. 1990. Influence of grazing, vegetative life-form and soil type on infiltration rates and interrill erosion on Somali rangeland. *Journal of Range Management*. 43:486-490.
- Thurow, T.L.** 1989. Decomposition of grasses and forbs in coastal savanna of southern Somalia. *African Journal of Ecology*. 27:201-206.
- Thurow, T.L.**, D.J. Herlocker and A.A. Elmi. 1989. Development projects and Somali pastoralism. *Rangelands*. 11:35-39.
- Thurow, T.L.** and A.J. Hussein. 1989. Observations on vegetation responses to improved grazing in Somalia. *Journal of Range Management*. 42:16-19.
- Thurow, T.L.**, W.H. Blackburn and C.A. Taylor, Jr. 1988. Infiltration and interrill erosion responses to selected livestock grazing strategies, Edwards Plateau, Texas. *Journal of Range Management*. 41:296-302.

**Thurow, T.L.**, W.H. Blackburn and C.A. Taylor, Jr. 1988. Some vegetation responses to selected livestock grazing strategies, Edwards Plateau, Texas. *Journal of Range Management*. 41:108-114.

**Thurow, T.L.**, W.H. Blackburn, S.D. Warren, and C.A. Taylor, Jr. 1987. Rainfall interception by midgrass, shortgrass and live oak mottes. *Journal of Range Management*. 40:455-460.

**Thurow, T.L.**, W.H. Blackburn and C.A. Taylor, Jr. 1986. Hydrologic characteristics of vegetation types as affected by livestock grazing systems, Edwards Plateau, Texas. *Journal of Range Management*. 39:505-509.

Warren, S.D., **T.L. Thurow**, W.H. Blackburn, and N.E. Garza. 1986. The influence of livestock trampling under intensive rotation grazing on soil hydrologic characteristics. *Journal of Range Management*. 39: 491-495.

White, C.M. and **T.L. Thurow**. 1985. Reproduction of Ferruginous Hawks exposed to controlled disturbance. *Condor*. 87:14-22.

**Thurow, T.L.** and C.M. White. 1984. Nesting success and prey selection of Long-eared Owls along a Juniper/Sagebrush ecotone in South-central Idaho. *Murrelet*. 35:10-14.

**Thurow, T.L.** and C.M. White. 1984. Nest site relationship between the Ferruginous Hawk and Swainson's Hawk. *Journal of Field Ornithology*. 54:401-406.

Breckenridge, R.P., L.S. Cahn, and **T.L. Thurow**. 1982. Biological treatments of geothermal water as alternatives to injection. *Geothermal Resources Journal*. 11:3-6.

**Thurow, T.L.** and H.L. Black. 1981. Ecology and behavior of the Gymnogyne. *Ostrich*. 65:354-373.

**Thurow, T.L.** 1978. An ecological and taxonomic investigation of *Peromyscus maniculatus serratus*. *Great Basin Naturalist*. 38:469-472.

## **Book Chapters**

**Thurow, T.L.** Speke's Gazelle ecology and behavior. (in press) In: J.S. Kingdon and M. Hoffmann (editors). *The Mammals of Africa. Vol. 6. Pigs, Deer, Giraffe, Bovids, and Hippos*. Academic Press, Amsterdam.

**Thurow, T.L.** 2005. Soil conservation considerations associated with grazing practices. (pages 499-501) In: W.G. Pond and A.W. Bell (editors). *Encyclopedia of Animal Science*. Marcel Dekker Publishers, New York.

**Thurow, T.L.** 2004. Spatial and temporal considerations associated with achieving sustainable stepland agriculture production. (pages 58-67). In: T. Partap (editor), *Evolving Sustainable Production Systems in Sloping Upland Areas B Land Classification Issues and Options*. Asian Development Organization, Tokyo.

**Thurow, T.L.** 2003. Water quality considerations associated with range and pasture management. (pages 764-767) In: B. Stewart and T. Howell (editors). *Encyclopedia of Water Science*. Marcel Dekker Publishers, New York.

**Thurow, T.L.** 2000. Hydrologic effects on rangeland degradation and restoration processes. (pages 53-66) In: O. Arnalds and S. Archer (editors). *Rangeland Desertification*. Kluwer Academic Press. Amsterdam.

Manu, A., **T.L. Thurow**, I. Zanguina and A. Juo. 1999. Agroecological impacts of a practical approach for restoration of degraded Sahelian watersheds. (pages 145-163) In: R. Lal (editor). *Integrated Watershed Management in the Global Ecosystem*. CRC Press, Boca Raton, Florida.

Sauerhaft, B., P.R. Berliner, and **T.L. Thurow**. 1998. The fuelwood crisis in arid zones: runoff agriculture for renewable energy production. (pages 351-363). In: H.J. Bruins and H. Lithwick (editors). *The Arid Frontier: Interactive Management of Environment and Development*. Kluwer Academic Press. Amsterdam.

**Thurow, T.L.** 1996. Rangeland watershed research and technology needs for the future. (pages 120-131) In: K. Spaeth, F. Pierson, M. Weltz and G. Hendricks (editors). *Grazingland Hydrology Issues: Perspectives for the 21st Century*. Society for Range Management, Denver.

Spaeth, K.E., **T.L. Thurow**, W.H. Blackburn, and F.B. Pierson. 1996. Ecological dynamics and management effects on rangeland hydrologic processes. (pages 25-49) In: K. Spaeth, F. Pierson, M. Weltz and G. Hendricks (editors). *Grazingland Hydrology Issues: Perspectives for the 21st Century*. Society for Range Management, Denver.

**Thurow, T.L.**, D.H. Carlson, and R.K. Heitschmidt. 1996. Estimating the impacts of alternative management practices on rangeland production and ecology using the SPUR model. (pages 165-177) In: T. Robertson, B.C. English and R.R. Alexander (editors). *Evaluating Natural Resource Use in Agriculture*. University of Tennessee, Institute of Agriculture, Knoxville.

**Thurow, T.L.** and A.S.R. Juo. 1995. The rationale for using a watershed as the basis for planning and development. (pages 93-116) In: A.S.R. Juo and R.D. Freed (editors). *Bridging Food Production and Environmental Protection in Developing Countries*. American Society of Agronomy. Madison, Wisconsin.

Carlson, D.H., **T.L. Thurow**, and R. Wight. 1995. Simulation of Production and Utilization on Rangelands (SPUR). (pages 1021-1068) In: V.P. Singh (editor). *Computer Models of Watershed Hydrology*. Water Resources Publications. Littleton, Colorado.

Elmi, A.A., **T.L. Thurow**, and T.W. Box. 1993. Composition of camel diets in central Somalia. (pages 141-154) In: A. Hjort (editor). *The Multi-Purpose Camel*. Uppsala University/MO Press. Uppsala, Sweden.

Carlson, D.H., **T.L. Thurow**, and C.A. Jones. 1993. Biophysical simulation models as a foundation of decision support systems. (pages 36-68) In: J.W. Stuth and B.G. Lyons (editors). *Decision Support Systems for the Management of Grazed Ecosystems*. UNESCO-MAB Book Series. Parthenon Press, New York.

**Thurow, T.L.**, D.J. Herlocker, and K.A. Gelle. 1991. Rangeland development innovations for communal land management: A Somali case study. (pages 82-97) In: R.P. Cincotta, C.W. Gay and G.K. Perrier (editors). *New Concepts in International Rangeland Development*. Society for Range Management, Denver.

**Thurow, T.L.** 1991. Hydrology and erosion. (pages 141-159) In: R.K. Heitschmidt and J.W. Stuth (editors). *Grazing Management: An Ecological Perspective*. Timber Press, Portland, Oregon.