

INDEX

Note: page numbers in italics refer to illustrations; those followed by “n” indicate endnotes.

- Acachuén, Michoacán, 35
Acuitzio-Villa Madero Forest Administrative Unit (UAF), 222–25
Agahuan, Michoacán, 229–30
agrarian reform. *See* land reform
Agrawal, Arun, 9, 278n4, 280n33
Aguilar, Jesús, 87
Aguillilla, Michoacán, 190–91
Aguirre Beltrán, Gonzalo, 7, 174–75
Ajuno-Ario de Rosales Railway, 37
Alcocer Patiño, Fernando, 144–45, 147, 289n60
Aldama, Chihuahua, 289n59
Alemán Valdés, Miguel, 129, 130, 137, 145–46, 170, 171
Alto de Dolores, Chihuahua, 152
American Smelting and Refining Company (ASARCO), 87–88, 152
Angáhuán, Michoacán, 158
anthropologists, 74–75, 169–70, 181, 236–37. *See also* Indigenista Coordinating Center of the Tarahumara
Appadurai, Arjun, 265n23
Aputzio de Juárez, Michoacán, 90–91, 92
Aranza, Michoacán, 224–25
Arbor Day celebrations, 98–101, 99
archives, 14–16
Arias, José Antonio, 198
Armendáriz, Gilberto U., 117, 119
Article 27 (1917 constitution), 74, 75–76, 274n50
ASARCO (American Smelting and Refining Company), 87–88, 152
Asociación Rural de Interés Colectivo (ARIC), 233
assimilationism, 169, 170
“association in participation” contracts, 216–17
Atenquique Paper Company, 141–43
Ávila Camacho, Manuel, 123–24, 129, 130, 132, 137, 171
avocado groves, 225–28, 231, 233
ayuntamientos, 51, 270n74
Babícora Development Company, 118, 119
Babícora hacienda, 44
Balsas Commission, 172, 194–95
Banco de Comercio Mexicano, 145
Banco Nacional de Crédito Agrícola (BNCA), 110–13
Banco Nacional de Crédito Ejidal (BNCE), 120, 130, 144, 147, 161–62
banditry, 68
Baqiriachic, Chihuahua, 177, 182
Barranca Seca, Michoacán, 194, 195, 199
Batopilas Mining Company, 40–42, 45–47
Beattie, H. S., 65
Becerra, Rafael, 48
Beltrán, Enrique, 192, 207, 232, 243, 286n8
Benítez, Fernando, 186
Bennett, Wendell, 49

- BNCE (Banco Nacional de Crédito Ejidal), 120, 130, 144, 147, 161–62
- Bocoyna, Chihuahua, 120–21, 145, 150–51, 289n59
- Boise Cascade, 241
- Borunda, Teófilo, 147
- Bosques de Chihuahua, 145–46, 150, 151–56, 211–13, 284n90
- bossism (*caciquismo*), 108–9
- bracero* guest-worker program, 160
- Bray, David, 241
- bribery, 162
- Brooks, Santiago, 85–86
- Caballero, José, 156
- Cabórachi, Chihuahua, 181–82, 218
- Caltzontzin, Michoacán, 158
- Campo Verde, Madera, 289n59
- Capácuaro, Michoacán, 34
- Carapan, Michoacán, 34
- Caraveo, Marcelo, 72, 117
- carboneros* (charcoal men), 35, 89–90
- Cárdenas, Lázaro: agrarian reform and, 110; Cargill lands and, 120; cooperatives and, 94–95, 104, 107, 121–22; forest service and, 102; logging bans by, 111, 136; national parks established by, 282n62; Quevedo and, 92, 103–4; *rentismo* and, 88; small-scale forestry initiatives, 105; Tepalcatepec and Balsas Commissions and, 161, 172–73, 187, 190, 194–95
- Cargill Lumber Company, 43, 119–20
- Carranza, Venustiano, 63, 65, 73, 75–76
- Caso, Alfonso, 170, 186
- Catholic Church, 26
- CCIT (Centro Coordinador Indigenista de la Tarahumara), 171, 173, 174–82, 199–201, 217
- CEPAMISA paper plant, 197, 222
- Chacón, Andrés, 151
- Chacón, Ignacio, 151
- chainsaws, 162
- Chapingo agricultural school, 121–22, 207, 231
- Chaporro hacienda, 37
- Charapan, Michoacán, 107
- charcoal, 35, 89–91
- charrismo*, 129
- Chávez Hernández, Servando, 224
- Cherán, Michoacán, 109, 229–30, 239–40, 243–44, 256
- Chiantú, Chihuahua, 234, 236
- Chihuahua: Batopilas Mining Company and, 40–42, 45–47; commodification of forests in, 45–51; cooperatives in, 113–21; debris collectors in, 46, 47; Echeverría's agrarian populism in, 211–15, 234; map, 41; Michoacán compared to, 19–20; postwar development and logging bans in, 144–51; privatization in, 27; railroads, foreign-owned, 42–44; revolution and labor issues in, 66, 68–73, 81; timber industry in, 44–45. *See also* Rarámuri; Sierra Tarahumara; *specific villages*
- Chihuahua and Pacific railroad, 42, 44, 268n47
- Chihuahua City, 289n59
- Chinchua hacienda, 67
- Chuhuichupa, Chihuahua, 152, 154–55
- Churo, Chihuahua, 148
- científicos* (scientist-advisors), 26
- Ciudad Hidalgo, Michoacán, 37, 224
- clandestinity (*clandestinaje*), 92, 139, 162–63, 220
- “closed corporate communities,” 277n2
- CNC (National Peasants Confederation), 129, 144, 204, 212
- Coalcomán, Michoacán, 190–91
- Cocucho, Michoacán, 93
- Coire, Michoacán, 196
- collective corporations (*condueñazgos*), 28
- colonization, 208–9
- Committee for the Social, Economic, and Environmental [*Forestal*] Recovery of the Tarahumara Region, 150
- commodification: definition of commodity, 265n23; in Porfiriato, 28, 30–35, 40; revolution and, 66–67
- communal property and village commons: commodification as threat to, 30;

- disentailment process, 26–27, 34;
remnants of, 28; survey companies and
privatization, 27; title, lack of, 26–27;
village elites and, 27–28
- community forestry, definition and
origins of, 17–19. *See also* cooperatives;
managed development projects, rural
- Compañía Industrial Maderera, 67–68,
83–84, 86
- Compañía Nacional de Maderas, 38
- Compañía Resinera de Uruapan, 107
- company housing, 70, 70–71, 71
- concessions: in Porfiriato, 26, 35, 36; UIEF
neoconcessions, 131, 136, 140–44, 146,
163–65, 187–201, 232, 261–62
- Consejo Supremo Tarahumara (Supreme
Council of the Tarahumara), 175, 178,
201, 214, 215, 237
- conservationism, nationalist, 100–101
- constitution (1917), 74–76, 274n50
- constitutional convention (1916), 73–74
- contratistas*, 79–80, 87, 122–23
- contratos de asociación en participación*
(joint venture agreements), 134–35
- cooperatives: Cárdenas vision and, 104;
contratistas and, 122–23; extension
agents and technical support for, 110–
13; in Michoacán, 106–10; Nuevo San
Juan Parangaricutiro, 160–61; number
of, 281n46; prohibition of, 121, 135; re-
sistance to, 106; revolutionary forestry
and, 95; rivals, 109; scientific manage-
ment, revolutionary social justice, and,
104–6; in Sierra Tarahumara, 113–21;
survival of, 123–24
- Córdova, Federico, 72
- cortes culturales*, 138
- Creel, Enrique, 42
- CROC (Revolutionary Confederation of
Workers and Campesinos), 197, 201
- Cuanajo, Michoacán, 30
- cultural pluralism, 170
- Cusárare, Chihuahua: capacity to produce
timber, 177; CCIT and, 182, 183–87;
cooperatives and, 124, 124, 248–49;
- deforestation in, 200–201, 234; land
reform and, 86–87; Union of Ejidal
Enterprises and, 217–18; World Bank
project and, 236
- cyanide, 41–42
- DAAC (Secretariat of Agrarian Reform),
193, 215
- debts of *ejidos*, 110–11
- deforestation: for avocado groves, 225–26;
factors contributing to, 254; falling rate
of, 255; official policies encouraging,
209–11; overview, 16–17; in Porfiriato,
30; rural people blamed for, 77; “tragedy
of the commons” and, 247–48
- de la Madrid, Miguel, 197, 206, 232, 234
- del Llano, Rodrigo, 286n8
- denunciations (*denuncios*), 146
- Departamento Autonomo Forestal y
de Caza y Pesca. *See* forest service,
national
- Department of Agrarian Reform, 114
- Department of Indian Affairs (Depart-
mento de Asuntos Indígenas), 112
- derecho de monte* (stumpage fee), 141
- desarrollo estabilizador* (stabilizing
development), 167–68, 203
- desiccation thesis, 53–54, 270n85
- Development Company of America, 42–43
- Díaz, Eduardo García, 278n8
- Díaz, Porfirio, and administration, 25, 51,
58, 60, 62, 73. *See also* Porfiriato
- Díaz, Waldemar, 226, 229, 292n103
- Díaz Ordaz, Gustavo, 167, 203, 205
- Dirección de Antropología, 170
- disaster capitalism, 161–62
- disentailment, 26–27, 34
- Doddoli, Paulo, 158–59, 292n103
- Domínguez, Luis Felipe, 64
- Dorantes, Prudenciano, 54
- Dos Aguas, Michoacán, 191, 199
- Dos Estrellas gold mine, 164
- dotación* process, 76–77
- Dunn, James H., 44
- Durango, 234–37

- Echeverría, Luis, 17, 155, 204–7, 211–16
ecosystem impacts: Humboldtian desiccation thesis, 53–54, 270n85; Michoacana de Occidente and, 190; overview, 16–17, 242; of silver mining, 41–42. *See also* deforestation
- educational campaigns: Arbor Day celebrations, 98–101, 99; transnational comparison and, 96
- ejidos*: CCIT and, 179–80; commercial output of, 285n101; debts of, 110–11; defined, xvi; *dotación* process, 76–77; joint venture agreements with, 134–35; number of, by presidential administration, 130. *See also* cooperatives; land reform; *specific places*
- Elizondo, Eliseo, 240
- El Jorullo volcano, 157
- El Largo, Chihuahua, 152, 155, 211, 212–13
- El Oso y La Avena (later Jesús García), Chihuahua, 152, 155
- El Rosario, Michoacán, 87–88
- El Varaloso, Michoacán, 193–94, 195
- El Vergel, Chihuahua, 148
- Emergency Plan for Railroad Tie Production, 140, 149–51, 229
- Enríquez, Ignacio C., 81–82
- Equihua family, 229
- Escobar, Rómulo, 54
- federalization, in Porfiriato, 51
- fire: campfires and, 153–54; Michoacana de Occidente and, 189, 192–93; railroads and, 43–44; *venganzas*, 193
- Flores Calderón, Emilio, 155
- Fondo Nacional para el Fomento Ejidal (FONAFE), 206–7
- Forest Development Agency of the Tarahumara (PROFORTARH), 216–20, 233
- Forest Management Units (Unidades de Ordenación Forestal; UOFs), 124, 163, 183–84, 249
- forest reserves, national: 1942 Forestry Code and, 134; 1949 Forestry Code and, 135; establishment of, 79, 102, 148; federalization and, 56; Papigochic, 120, 125; U.S. as role model for, 96
- Forestry Code of 1926, 11–12, 79–81, 91, 259
- Forestry Code of 1942, 134–35, 140, 259
- Forestry Code of 1949, 135–36, 140, 259
- Forestry Code of 1960, 259
- Forestry Code of 1986, 259
- Forestry Code of 1992, 259
- Forestry Code of 2003, 259
- Forestry Code of 2008, 259
- forestry conference (1941), 132–34
- Forestry Management Units (UOFs), 124, 183
- Forestry Society, 98, 100
- forest service, national: administrative status changes, xv–xvi, 121–22; cooperatives and, 104, 122; elevation to cabinet level, 95, 279n30; names of, xv–xvi; Quevedo and, 55–58, 132; reputation of, 101; research studies, 103; revolution and, 65. *See also* Quevedo, Miguel Ángel de
- Fox, Vicente, 241
- fraudulent contracts, 39–40
- French National School of Forestry, 56
- Fuerte Basin Commission, 172
- Galicia, Daniel, 86–87, 116–17, 183–85, 187
- Gamio, Manuel, 74–75, 169–70
- Gámiz, Arturo, 212
- García, Chihuahua, 152
- Gayol y Soto, Roberto, 97
- General Felipe Angeles collective, 233
- General Union of Workers and Campesinos (UGOCM), 204, 211–12
- Geronimo, 40
- goat herding, 115, 153
- goat-maize subsistence ecology, 49
- González, Roberto, 182
- González Múzquiz, José and Mario, 145, 214
- González Pacheco, Cuatémoc, 236
- González Ugarte, Juan, 83, 86, 145
- Greene, William C., 43, 58

- Grijalva River Commission, 172, 210
 Grupo Chihuahua, 284n90
 Grupo Parral, 145
 Guachochi, Chihuahua, 115–16, 147, 165, 174–77, 181–82, 218, 236–37
 Guaguachique, Chihuahua, 179
 Guerrero, Antonio A., 120, 284n90
 Guerrero, Salvador, 78
 Guha, Ramchandra, 61
guías forestales (logging permits), 80
- Hacienda de la Orilla, 67
 Hardin, Garrett, 246–47
 hatchet prohibitions, 80–81, 180
 Hayes, Edward, 72
 Hearst, William Randolph, 40, 44, 118, 119
 Hercorio, Michoacán, 163
 Heredia, Chihuahua, 150
 Hernández, Refugio, 46
 high grading, 117, 288n46
 Hinojosa, Gabriel, 35
 Hinojosa Ortiz, Manuel, 149–50
 homogenization of agriculture, 226–27
 Huáchara, Chihuahua, 48
 Huerta, Victoriano, 62–63, 65, 67–68, 69, 98
 Humboldt, Alexander von, 53–54
 hygienic forests, theory of, 53, 270n87
- Ibarrola, Antonio, 67
 Ibarrola, Rafael, 67
 Indigenista Coordinating Center of the Tarahumara (Centro Coordinador Indigenista de la Tarahumara; CCIT), 171, 173, 174–82, 199–201, 217
 industrialization, in Porfiriato, 29
 industrial model: 1942 and 1949 forestry codes, 134–36, 140; Bosques de Chihuahua and, 145–46, 151–56; Chihuahua, postwar development and logging bans in, 144–51; forestry conference (1941), 132–34; industrialization of forests, meaning of, 130–31; logging bans and failures and, 136–40; Paricutín eruption and development in Michoacán, 156–61, 157; presidential policies, 129–30, 164–65; Second World War and, 129, 130; UIEF neoconcessions, 131, 136, 140–44, 146, 163–65
 Industrial Units for Forest Development (Unidades Industriales de Explotación Forestal; UIEFs): about, 131, 136, 140–44, 163–65; Bosques de Chihuahua, 146; elimination of, 232; list of, 261–62; Michoacana de Occidente, 173–74, 187–201
 Industrial Uruapan, 292n103
 Industrias Río Verde, 145
 Infiernillo dam, 172
 INI (National Indigenist Institute), 147, 169, 170–71, 176–77, 185, 236–37. *See also* Indigenista Coordinating Center of the Tarahumara
 inspectors, 14, 17, 51–52, 57, 67, 80, 93–94, 155
 Institute of Forest Research (Instituto de Investigaciones Forestales), 102–3, 121–22
 Institutional Revolutionary Party (PRI), 130, 167–68, 203, 240
 Inter-American Development Bank, 234
 investment planning, 179–80
 Irigoyen, Francisco, 151
- Jesuit missionaries, 48, 50
 joint venture agreements (*contratos de asociación en participación*), 134–35
 Juárez, Benito, and administration, 26, 50, 51–52
 Jucatácato hacienda, 66
 Junta Central de Bosques y Arbolados (Central Committee on Forests and Woods), 55–59, 98
 jurisdictional disputes, 101–2
- Kimberly-Clark, 206
 Klein, Naomi, 161
- La Cañada de los Once Pueblos, Michoacán, 36, 108–9
 Lake Pátzcuaro, 67

- land invasions, 204, 212
- land reform: about, 4; Article 27 as basis for, 75–76; Bosques de Chihuahua and, 155; Forest Code of 1926, 79–81, 91; mestizos and fraudulent practices, 82–83; Michoacán agrarian movement, 87–91, 110; peasant discontent over, 203–4; peasant practices and education, 78; rationalizing logic and, 61; rebound of (1950s to 1970s), 167; reformed to include women (1971), 205; scientists' skepticism about, 77; in Sierra Tarahumara, 81–87; structural challenges, 252–53; technification of, 110–13; uniform land reform code (1922), 76–77
- La Norteña, Chihuahua, 154–55, 156
- La Soledad, Chihuahua, 179
- Las Palomas sawmill, 38
- Le Play, Frédéric, 56
- Lerdo Law, 26, 188
- liberalism and the Porfirian order, 25–26.
See also neoliberalism
- Liga de Comunidades Indígenas de Bosques, 88
- Limantour, José Yves, 43, 119–20
- Limantour, Julio, 43
- lluch y Llanderal company, 292n103
- logging and timber industry: North American vs. Mexican workers and housing at, 69–71, 70, 71; in Porfiriano, 29–30, 44–45; Rarámuri, relationship with (overview), 3–4; revolution and, 65, 67–73; Second World War and, 125; slash collectors and, 45–46, 47. *See also specific companies, places, and topics, such as* land reform
- logging bans (*vedas*): by Cárdenas in Meseta Purépecha, 111; in Chihuahua, 148–49; industrial model and failures of, 136–40; in Michoacán, 160, 163, 220–21; Paricutín eruption and, 160
- logging rights, acquisition of, 38–40
- López de Santa Anna, Antonio, 51, 270n74
- López Mateos, Adolfo, 167, 179, 194
- López Portillo, José, 206
- Loreto y Peña Pobre, 141–42
- Louisiana Timberland, 145
- Lumholtz, Carl, 32, 33
- Madera, Chihuahua, 43, 156, 211–13
- Madera Lumber Company, 44, 45, 50–51, 68–73, 82, 116–19, 151
- Madera sawmill, 116–19, 125
- Maderas de Chihuahua, 120, 125
- Maderas Industrializadas de Quintana Roo, 208
- Madero, Francisco I., 45, 62–63, 67
- managed development projects, rural: Cusárare CCIT, 183–87; INI coordinating centers (CCITs), 170–71, 173, 174–82, 199–201; Michoacana de Occidente UIEF, 173–74, 187–201; postrevolutionary indigenismo and, 169–70; PRI leadership, development theory, and, 167–69; river basin commission projects, 168–69, 171–73
- Martín del Campo, Ramón, 161
- Martínez, Timoteo, 115–16
- Matthews, Andrew, 13, 255
- maximum-yield logging, 135
- McCook, Stuart, 96
- memory, collective, 244
- Mercado, Aristeo, 39
- Meseta Purépecha: logging bans, 111; resin tapping in, 111–12; settlement in, 32
- mestizo settlers (*chabochis*): cooperatives and, 114, 120–21; industrial forestry and, 146–47, 151; in Michoacán in 19th century, 32–33; Sierra Tarahumara *ejidos* filed by, 82–83, 84–85
- Mexican management method for uneven-age forests (*método mexicano de ordenación de montes*; MMOM), 142–43, 144
- “Mexican miracle,” 130
- Mexican National Railroad, 140
- Mexico, geography and human ecology of, 5–10, 6
- Mexico City: growth of, 89; political landscapes and, 21; Quevado as director

- of public works in, 55; Quevado's Junta Central de Bosques, 55–58; student protests and Tlatelolco massacre, 203; wood and charcoal demand in, 89
- México Forestal*, 78, 96
- Mexico North Western Railway, 44, 116
- Meza, José María, 46
- Michoacán: agrarian movement in, 87–91, 110; Chihuahua compared to, 19–20; commodification of forests in Porfiriato, 30–31; cooperatives in, 106–10; forest regulation in, 54–55; logging bans, 111; map, 31; mestizos in, 32–33; modernization of forests in, 161–64; native communities and population in, 31–32, 269n67; Parícutin eruption and development in, 156–61, 157, 228; railroads and timber in Porfiriato, 35–40; revolution and agrarian tensions in, 66–68; state forestry and PROFORMICH in, 220–26, 233–34. *See also specific villages*
- Michoacana de Occidente (La Michoacana), 163, 173–74, 187–201, 191
- Michoacán Y Pacífico railroad, 36
- microclimates, 116, 283n81
- Miguel Alemán Dam, 172
- militias, 239, 256
- mining: ASARCO, 87–88, 152; Batopilas Mining Company, 40–42, 45–47; El Rosario and, 87–88; Montes-Industrias-Minas and Dos Estrellas gold mine, 164; Potosí Mining Company, 152; Rarámuri and, 50
- Ministry of Development (Fomento), 51–52, 56–57
- MMOM (*método mexicano de ordenación de montes*; Mexican management method for uneven-age forests), 142–43, 144
- Montes-Industrias-Minas, 164
- Montiel, Rodolfo, 241
- Mora, José de la, 145
- Morelia, railroad connection to, 35
- Morelos, water crisis in, 28–29
- Moreno, Manuel F., 161
- Motuto, Agapito, 66
- Múgica, Francisco J., 100
- municipios*, 51
- Murphy, Frank Morrill, 42–43
- Nahua communities, 32, 74–75, 196. *See also* Pómaro, Michoacán
- Naná Cuerápperi, 33
- narco-loggers, 239, 242
- National Autonomous University of Mexico (UNAM), 231, 305n86
- National Confederation of Workers (CTM), 129
- National Forestry Council, 135
- National Indigenist Institute (INI), 147, 169, 170–71, 176–77, 185, 236–37. *See also* Indigenista Coordinating Center of the Tarahumara
- National Museum of National Flora and Fauna, 102
- national parks, 19, 102, 136–37, 282n62
- National Peasants Confederation (CNC), 129, 144, 204, 212
- National School of Anthropology and History (ENAH), 236
- neoliberalism, 231–34, 240–42, 255–56
- Northeast Railroad (Chihuahua al Pacífico), 125
- North Western Railroad Line, 82, 118, 118, 151
- Nuevo San Juan Parangaricutiro, Michoacán, 160–61
- Nuhua communities, 188
- Obregón, Alvaro, 73, 76, 78, 120
- Ochoa, Digna, 241
- Orozco, Andrés, 93–94, 101
- Orozco, Pascual, 62, 68, 69, 71–72
- Ortiz, Rafael, 160, 291n98, 292n103
- Ortiz Rubio, Pascual, 278n5
- Ostula, Michoacán, 196
- Otomí, 32
- Pacific Timber Company, 38
- Palmer and Sullivan Company, 35

- Papaloapan Commission, 171–72
- Papigochic forest reserve, 120, 125
- paragovernmental corporations
(*paraestatales*). *See* state forestry and
paragovernmental corporations
- Parangaricutiro, Michoacán, 34
- Paricutín volcano, 156–61, 157, 228
- Parsons, Talcott, 168
- Pátzcuaro-Uruapan railroad, 36
- Pearson, Fred Stark, 44, 68
- Pearson (later Mata Ortiz), Chihuahua,
44, 72, 72–73
- Pérez, Bernardo, 186–87
- Peribán, Michoacán, 226
- Pinchot, Gifford, 56
- pine-oak ecosystem, 5, 190
- pine resin tapping, 108, 111–13, 159–60,
163, 190, 221, 224–25, 229–30
- Pino Gordo, Chihuahua, 241
- Plancarte, Francisco, 175–77, 178, 181, 182,
199, 296n54
- Plan of Ayala, 64
- “political landscapes,” 10–14, 254–57
- Pómaro, Michoacán, 38, 196, 199
- Pomposo Solís e Hijos, 89–90
- Porfiriato (1876–1911): autocratic regime,
25; Cherán in, 240; *científicos*, 26;
conservation and birth of scientific
forestry, 51–54; disentanglement and
other threats to village commons,
26–28; ecology of commodification in
Chihuahua, 45–51; forest commodifi-
cation in Michoacán, 30–35; industrial
logging and deforestation, 29–30;
liberalism and the Porfirian order,
25–26; natural resources commodifi-
cation and the Morelos water crisis,
28–29; neocolonialism and nature in
Chihuahua, 40–45; Quevedo and the
national forest service, 55–58; railroads
and timber in Michoacán, 35–40;
social cleavages at end of, 58–59; state
government regulations, 54–55
- postrevolutionary indigenismo, 169–70
- Potosí Mining Company, 152
- poverty, 107, 133, 169, 174, 236, 243
- Prado, Ernesto, 87
- Prado family, 108–9
- Prebisch, Raul, 168
- precipitation and the desiccation thesis,
53–54, 270n85
- PRI (Institutional Revolutionary Party),
130, 167–68, 203, 240
- pricing of forest products, 141, 197
- privatization of land, 26–28, 30, 34, 36, 38,
188. *See also* communal property and
village commons
- producers cooperatives. *See* cooperatives
- PROFORMICH (Promotora Forestal de
Michoacán), 221–26, 233, 237
- PROFORTARH (Forest Development
Agency of the Tarahumara), 216–20,
233
- Programa Nacional de Desmontes
(National Deforestation Program;
PRONADE), 209–11
- Promotora Forestal de Michoacán
(PROFORMICH), 221–26, 233, 237
- protest movements, 203–4, 241
- Pulido, Ponciano, 156
- Purépecha: bribery against, 162; coop-
eratives and, 107; forest practices of,
33–34; forests as refuge for, 32; forests
in culture and tradition of, 33; labor
demographics among, 163; Nuhua and,
188; population, 32, 269n67. *See also*
Michoacán
- Quevedo, Miguel Ángel de, 15; Cárdenas
and, 92, 103–4; conflicts with, 122; con-
stitution and, 75; on cooperatives, 106,
132; on deforestation, 94; final report
of, 132; forest service and, 30, 54–59,
95; Institute of Forest Research and,
102, 121–22; Junta Central de Bosques y
Arbolados and, 55–59; land reform and,
77; rational management and, 60–61;
revolution and, 65; Sociedad Forestal
Mexicana and, 78–79; transnational
comparison and, 96–97
- Quintana Roo, 208–9, 241
- Quívaro, Chihuahua, 115

- Radding, Cynthia, 10
 railroads: in Chihuahua, 42–44, 82; fires caused by, 43–44; in Michoacán, 35–38, 37; revolution and, 65
 Ramírez, Ignacio, 54
rancherías, 48
 Rarámuri (Tarahumara): acculturation and, 216; CCIT and, 174–82, 183–87; cooperatives and, 114–16; dispersed settlement of, 48; forest commodification and, 48–50; goat-maize subsistence ecology of, 49; land reform and, 82–87; numbers of, 114; population, 269n67; postwar industrial forestry and, 146–51; Sosa and, 1–2; *tesguinada* festivals, 48–49, 50; timber companies, relationship with, 3–4; timber companies and, 29–30; woods, view of, 3; as woodsmen, 49–50; woodworking skill of, 114–15. *See also* Chihuahua; Sierra Tarahumara
 rational management, revolutionary imperative for, 60–61
 reforestation projects, 102, 192, 193
 regional superintendents of logging bans (*jefes de zona vedada*), 137–38
rentismo (rental contracts), 88–89, 138–39
reparto (allotment and privatization), 188
 Resinera Uruapan, 159, 161, 292n103
 resin tapping, 108, 111–13, 159–60, 163, 190, 221, 224–25, 229–30
 revolution (1910–17): Cherán and, 240; Chihuahua and, 68–73, 81; events of, 60, 62–64; forests, implications for, 64–66; Michoacán and, 66–68; Morelos water crisis and, 29; rational management imperative from, 60–61
 Revolutionary Confederation of Workers and Campesinos (CROC), 197, 201
 “revolutionary forestry,” 12, 95, 248–51. *See also* Cárdenas, Lázaro; cooperatives
 Rio Grande, Sierra Madre, and Pacific Railway, 268n47
 Riquilme, Julio, 78
 Rivera, Socorro, 119
 river basin commissions and projects, 168–69, 171–73
 Robinson, John, 40
 Rocheáchi, Chihuahua, 82–83, 182
 Rodríguez Carvajal, Evangelina, 100
 Roldán, Angel, 78
 Romano, Agustín, 182
ronda militias, 239, 256
 Roosevelt, Theodore, 56
 Rostow, Walt, 168
 Rouaix, Pastor, 274n50
 Ruiz Cortines, Adolfo, 129, 130, 153, 164–65, 167, 176
 Salazar, José Inés, 69
 Salinas de Gortari, Carlos, 229, 232
 Samachique, Chihuahua, 115, 182
 San Ángel Zurumucapio, Michoacán, 66
 Sánchez Monroy, Ricardo, 222–23, 224
 San Elías hacienda, 289n59
 San Fernando, Tamaulipas, 210
 San Francisco de los Reyes, Michoacán, 90
 San Joaquín Jaripeo hacienda, 68
 San Juan Chiantú, Chihuahua, 213–14
 San Juan Evangelista, Michoacán, 107–8
 San Juanito, Chihuahua, 83–85, 131, 216
 San Juan Nuevo Parangaricutiro, Michoacán, 228–31, 233, 255
 San Juan Parangaricutiro, Michoacán, 39, 156, 158, 228
 San Lorenzo, Michoacán, 36
 San Rafael, Chihuahua, 150
 San Rafael y Anexas, 141–43, 197
 Santiago, Myrna, 28
 sawflies (*Neodiprion vallicola*), 230
 schools, 98–101, 99
 Secretariat of Agrarian Reform (DAAC), 193, 215
 Secretariat of Agriculture, 101, 109, 121, 214, 232, 233, 237
 Secretariat of Public Education (SEP), 98
 Senguío, Michoacán, 67
 Shepherd, Alexander “Boss,” 40–42, 45–47
 Sicuir-Achá, 33
 Sierra de Coalcomán, 38, 190–91
 Sierra Madre and Pacific Railway, 268n47
 Sierra Madre Land and Lumber Company,

- Sierra Petatlán, Guerrero, 241
- Sierra Tarahumara: CCIT in, 174–82, 199–201; cooperatives in, 113–21; industrial forestry in, 146–47; land privatization in, 27; land reform in, 81–87; PROFORTARH and state forestry in, 215–20; railroads in, 42–43; settlement patterns in, 48; Sosa and, 1–3; World Bank project, 234–37. *See also* Rarámuri
- silver mines, 40–42, 45–47
- Simonian, Lane, 122
- Sisoguichi, Chihuahua, 217–18, 218, 219
- Slade, Santiago, 38–39, 67–68, 240, 244
- slash-and-burn (swidden) agriculture, 33, 189, 213
- slash collectors, 45–46, 47, 89–90
- Sociedad Forestal Mexicana, 78–79
- Sociedad Local de Crédito Ejidal, 296n63
- Solís, Pomposo, and Solís family, 37, 89–90, 292n103
- Sosa, Antonio H., 1–3, 234
- stabilizing development model (*desarrollo estabilizador*), 167–68, 203
- state forestry and paragonovernmental corporations: avocado groves (Michoacán), 226–28, 231; background, 203–5; colonization and PRONADE deforestation program, 208–11; Echeverría’s “shared development,” 205; environmental populism in Chihuahua, 211–15; expert opinions on, 207; neoliberalism, community management, and failure of, 231–34; PROFORMICH (Michoacán), 220–26; PROFORTARH (Sierra Tarahumara), 215–20; regime of state forestry, 205–8; San Juan Nuevo Parangaricutiro and resurgence of community forestry, 228–31; World Bank project (Sierra Tarahumara), 234–37
- state government regulations in Porfiriato, 54–55
- stereotypes of indigenous peoples, 74–75, 106
- strikes, 58
- stumpage fee (*derecho de monte*), 141
- Suichi Lumber Company, 89
- Supreme Council of the Tarahumara (Consejo Supremo Tarahumara), 175, 178, 201, 214, 215, 237
- survey companies, 27
- swidden (slash-and-burn) agriculture, 33, 189, 213
- Tanaquillo, Michoacán, 108
- Tapia, Primo, 87
- Tarahumara. *See* Rarámuri
- Tarascan Regional Indigenous Conference, 107
- Tarascans. *See* Purépecha
- taxation, 117
- tax sales of property, 27
- tejamanil* planks and shingles, 33–34, 39, 106, 113, 133, 158
- Tepalcatepec Commission, 161, 172, 187, 190
- territoriality, 10
- tesgüinada* festivals, 48–49, 50
- Thomas, John Henry, 72
- Tilly, Charles, 244
- timber companies. *See* logging and timber industry
- Tlatelolco massacre, 203
- Toluca-Zitácuaro Railroad, 90
- Tomochic, Chihuahua, 216
- Tortolero, Alejandro, 28
- “tragedy of the commons,” 246–47
- Trouyet, Carlos, 145
- UGOCM (General Union of Workers and Campesinos), 204, 211–12
- UIEFs (Unidades Industriales de Explotación Forestal). *See* Industrial Units for Forest Development
- Unidades de Ordenación Forestal (UOFs), 124, 163, 183–84, 249
- Unión de Madereros de Chihuahua, 148–49, 289n61
- Union of Ejidal Enterprises of the Tarahumara, 217–18
- Universidad Michoacana, 228
- urbanization, 35
- Urique, Chihuahua, 48, 85–86

- Uruapan, Michoacán, 225–28
- Usumacinta Brigade, 64
- Vaca Solorio, Rafael, 160, 291n98, 292n103
- Vallina García, Eloy S., 145, 211–12
- Vasconcelos, José, 98
- Vatant, Françoise, 82
- Vázquez, Rigoberto, 133
- Villa, Pancho, 63, 65, 68, 69, 74, 81
- village commons. *See* communal property
and village commons
- Villa Mojica, Juventina, 306n5
- Villistas, 70–71, 72
- Viveros de Coyoacán, 14–16, 55–56
- Vos, Jan de, 64
- water resources, 28, 46–47. *See also* river
basin commissions and projects
- Wolf, Eric, 277n2
- World Bank project, 234–37
- World War II, 124–25, 129, 131
- Yoquivo, Chihuahua, 182
- Zafiro, Pablo, 183–86
- Zapata, Emiliano, 29, 62–63, 65
- Zapatistas, 63–64, 74
- Zingg, Robert, 49
- Zirosto, Michoacán, 158
- Zitácuaro, Michoacán, 37, 87, 90, 162,
272n23