

Index

- Act Labor, 103, 121, 125, 182, *see also* legislative Acts
- Actor-Network-Theory (ANT), 79–81
- agency, 79
- agrarian colonization, 14–18, 136–143
- agrarian imaginaries, 29–31
- agrarian innovation, 20
- agrarian reform, 6, 17, *see also* modernity and modernization
- agrarian, plantations as, 50–59, 196–197
- Agricultural and Horticultural Society of India (AHSI), 20, 56
- Agricultural Organization (FAO), 204
- agronomy, 5–14, 19
- Ahom dynasty, 42, 46
- ajhar (*Lagerstræmia reginæ*), 144
- Aldrovandus, Ulysses, 78
- Almeida, Father Louis, 37
- Amboyna, massacre of, 37
- Amrita Bazar Patrika, The*, 177, 193
- ancyllostomiasis (hookworm disease), 110–114, 127, 130
- Andrews, C. F., 172, 176, 177, 193
- anemia, 97, 110, 129
- Anglo-Burmese war (1825–26), 42
- Anipur garden, 169
- Annual Sanitary Reports (ASR), 97, 108
- anopheles mosquitoes, 14, 93, 115–116
- apportionment of income taxes, 61, 65, 71–76
- Arbuthnott, J. C., 149, 158
- Aristotle, *Historia Animalium*, 77
- Arnold, David, 19, 98, 106, 108
- Asia* (ship), 153–154
- Assam
- agronomic growth, 200
 - annexation of, 1
 - disease identity, 131
 - forests, 162
 - government position on walkouts, 176
 - growing districts, 8
 - lower, 47
 - postcolonial conditions, 24
 - surrounding regions and, 2
 - upper, 42, 48, 52, 56, 115
- Assam Assembly, 200
- Assam Bengal Railways (ABR), 104–105, 172
- Assam Company
- early workings of, 47
 - forest felling and, 56
 - illegal contracts, 191
 - land grants, 15–17, 137
 - land revenue, 149
 - profits, 56
- Assam Forest Enquiry Committee, 164
- Assam Frontier Company, 167
- Assam Labour Enquiry Commission (ALEC)
- 1906, 97, 129
 - 1921–22, 178, 185–191
- Assam Land and Revenue Regulation (1886), 142
- Assam plantations, 9–10, 195–200, *see also* planters
- agronomy and, 5–10
 - culture and, 29–31
 - early history of, 41–48
 - ethno-social impact of, 4–5, 13
 - images of, 10, 139, 166, 184
 - local participation in, 18
 - overview, 1–5
 - political authority, 13
 - regional politics and, 4–5
 - taxes on, 50–59, 196–197
 - tea yields, 87–89, 88
 - unregulated status, 195–199
 - working conditions after walkouts, 195–200
- Assam Railways and Trading Company (ARTC), 109, 150–152
- Assam Rifles, 167
- Assam Settlement Rules of 1870, 141
- Assam Settlement Rules of 1886, 60

- Assam tea
 'discovery' of, 18, 32, 34, 42–44, 51–52
 authenticity of, 44
 botanical origins, 43
 organic, 30
 Assam Valley districts, 167, 185
 atmospheric theory (cholera), 105, 107, 109
 Auckland, Lord, 47
 authority, 13, 26, 79, 101, 131
 British Empire and, 13, 161
 ideological, 49
 improvement and, 50
 Indian Tea Association (ITA), 50–59
 natural, 50
 planters and, 13, 50–59, 64, 75, 124
 scientific expertise and, 49
 tax officers and, 73
 autonomy movements, 3, 200
Azadirachta indica (neem), 204
- backwardness, 44, 64, 131
 'bad batch' theory, 105, 107, 127
 Baden-Powell, B. H., 158, 160–164
 Bahadur, Rai Radha Charan Pal, 193
 Baidon, Samuel, 36, 58–59
 Baitakhal, 169
 Balipara sâl forests, 143
 Ball, Samuel, 34
 Bamber, M. Kelway, 58–59
 Bangladesh, 202
 Banks, Sir Joseph, 19, 41
 Bantam, Java, 38
 Barak Valley, 64
bari (homestead) lands, 15
 Barron, T. J., 11
 Bartholomaeus Anglicus, *De Proprietatibus Rerum*, 78
 Barton, Gregory, 160
 Barua, Ghanashyam, 65
 Barua, Rosheswar, 140
 basti workers, 182
Batea Banda Puk, 92
 Beadon Bryant, F., 155–156, 158
 Beauclerk, Captain, 151–152
 Beesa, 43
 beetles, 154
 Behal, Rana P., 4, 22, 55, 57, 117, 120, 182
 Bengal, 5, 107, 124, 146
 immigrants from, 3
 labor mortality from diseases, 111–112
 Bengal Congress, 178
 Bengal Forest Department, 143
 Bengal Legislative Council, 193
 Bengal Mahajan Sabha, 67
 Bengal Tea Association, 47
 Bengal, government of (GOB)
 enforcement of labor laws, 183
 forests and, 143
 labor unrest and, 169, 176, 193
 land tenure, 138–140, 142
 taxation and, 63
 Bentinck, William Cavendish, 42
 Bentley, C. A., 112
 Berenbaum, May R., 77
 beri-beri, 110, 112
 Besky, Sarah, 31
 Bhattacharya, Nandini, 98–99, 116
 Bhuyan, S. K., 15
 Bihar, 3, 63, 106–107
 binaries, 31
 biocolonialism, 51
 bio-imperialism, 18–25
 black fever. *See* kala-azar (black fever)
 'Blacktown fever', 110
 Bland, William & James, 47
 blights, 9, 77, 90–91, 96
 blister blight, 77, 81, 86
 Board of Revenue, 136–138
 body, 97–98, *see also* health
 health and, 101–104
 natural state of, 103–104
bohea, 54
Bombay Chronicle, The, 187, 191
 Bombay Presidency, 3
 Bonsall, Spencer, 56
 Bordeaux spray, 12
 botanical gardens, 20
 botanists, 51, 66, *see also* scientific expertise
 Brahmachari, U. N., 115
 Brahmaputra River, 108, 154, 171
 Brahmaputra Valley, 48, 142, 186, 200
 Brandis, Dietrich, 143–147, 157
 British Broadcasting Company (BBC), 3
 British Empire. *See also* colonialism, imperialism
 annexation of Assam, 1, 136
 as bio-political force, 23
 Assam tea and, 1
 historiography, 22–24
 non-interference, 107
 political authority of, 13
 British Guiana, 3
 British Medical Association, 116, 118
 British West Indies, 9
 Broomfield, J. H., 176
 Brown, Nathan, 18, 132
 Bruce, C. A., 77
 Bruce, Charles, 42, 43, 45, 47, 52
 Bruce, Robert, 42, 52

226 Index

- brush fires, 90
 Bryden, James L., 105
 bugs, 6, 22, 199, *see also* tea pests
 use of term, 77
 Burma, 146, 162
 Burmese territory, 42
- Cachar and Sylhet Tea Factory, 64
 Cachar district, 48, 87–89, 91, 141, 149,
 153, 159, 165, 168
 caffeine, 59
 Calcutta, 106
 Calcutta agency houses, 184, 190
 Calcutta Botanical Gardens, 41, 52, 136
 Calcutta High Court, 68–71
 Calcutta Medical School, 111
 Calcutta School of Tropical Medicine
 (CSTM), 111–112, 115, 116, 130
 California, 89–91
 Canning, Governor-General, 139, 163
 Cape of Good Hope, 36
 capitalism, 101
 extractive commodity, 3
 health and, 98–104
 long-term impacts of, 23–25
 Carpenter, P. H., 59
 Carr, E. S., 159
 caste regulations, 93, 95
 Catherine of Braganza, 38
 Catholic missionaries, 36
 Ceylon, 46, 67, 89
 coffee plantations, 11–12, 84
 tea industry, 181
 Chandpur incident, 169, 175, 176, 178,
 192–193
 Charaideo tea estate, 149
 charcoal, 133–134, 141, 143, 145–146, 156
 Chargola walkout, 168, 175, 192
 Charingia, Assam, 111, 113
 Charles II, 38
 Charlton, Andrew, 43, 45, 52
 Charter Act of 1833, 14
 Chattopadhyay, Dakshinacharan, *Cha-Kar
 Darpan Natak*, 28, 82
 Chaudhuri, J., 69
 Chelmsford (Viceroy), 174
 chemicals, 204, *see also* pesticides
 chemists, 66, 70, *see also* scientific expertise
 Chief Commissioner of Assam, 174
 child labor, 197
 Chin dynasty, 35
 China, 67
 early history of tea in, 34–37
 East India Company and, 40–41
 tea varieties from, 22
 China-Assam hybrid tea, 52–54, 67
 scientific expertise and, 44–46
 Chinese tea
 compared to Assam tea, 44, 53–54, 75
 pests and, 84, 86
 Chinese tea-men, 45–46, 52
 cholera, 12, 28, 33, 79, 97, 100,
 129–130, 199
 deaths, 109
 etiology, 119
 outbreaks, 104–110, 169–170
 Christophers, S. R., 112–113
 churs (riverine sandbanks), 44
 Clark, J.F.M., 81
 Clarke, J. J., 109–110
 climate, 75, 77, 84, 87–89, *see also*
 microclimates
 coal, 82, 150
 Coal Indenture of 1881, 152
 Cockrell & Co., 47
 co-dependency, 134, 153–159
 coercion, 13, *see also* labor exploitation
 coffee plantations, 11–12
 coffee rat (*Golundus ellioti*), 84
 coffee rust, 84
 colonialism, 79–81, *see also* British Empire,
 imperialism
 administrative limits of, 125
 authority and, 161
 biocolonialism, 51
 public health and, 99
 Colvin, J. R., 47
 comma bacillus organism, 106
 commerce, culture of, 178–191
 competition, 37–38, 67
 Congress, 176
 conservancy, 110, 113, 114, *see also* forests
 Consulting Engineer to GOI for
 Railways, 104
 contagionist theories, 105–108
 contract bonuses, 191
 ‘coolies’
 paternalist theories about, 189–190, 199
 perceptions of bodies of, 103
 Cooper, W., 164
 Cornwallis, 60
 Cosgrave, W. A., 190
 cost of living, 172–173, *see also* wages
 Cotton, H.J.S., 104
 Crawford, T. C., 72
 Crole, David, 38, 44, 46, 54–55, 59, 70, 76
 crop reduction, 181
 Crop Restriction Program (CRP),
 181–182, 186
 Cruickshank (tea-rolling machine), 58

- CSTM. *See* Calcutta School of Tropical Medicine (CSTM)
- cultivation
 homestead, 1
 income tax debates and, 66–67
- culture
 definitions of, 29, 30
 of commerce, 178–191
- Cunningham, J. M., 105–107
- Cunningham, D. D., 112
- Daily Telegraph*, 178
- Daisijan garden, 167
- Dalhousie, Governor-General, 15, 163
- Darbhangā, 106
- Darjeeling tea plantations, 29–30, 86, 205
 pest management, 89–90
- Darrang, 48, 183, 185, 187, 189
- Das, C. R., 172, 192
- Das, Rajani Kanta, 125
- Daukes, F. C., 156–157
- Davidson (tea drying machine), 59
- De, K. C., 170
- Deb, Raja Radhakanta, 42
- deforestation, 157, *see also* forests
- Dehing Saw Mill, 153
- Demerara, 205
- deodar (*Cedrus deodara*), 160
- DeRenzy, Annesley Charles C., 105, 108–109, 130
- desertions, 3, *see also* labor unrest
- Dhekial Phukan, Anandaram, 15
- Dhoedaam garden, 167, 174
- Dhubri, 110
- diarrhea, 97
- Dibrugarh district, 94, 143, 167
- Dibru-Sadiya Railway, 173
- Diju forest reserve, 148
- disarray, 6, 18–25, 205
- disease environments, 28
- diseases, human, 33, *see also* health, malaria, epidemiology, etiology, kala-azar (black fever), cholera
- Donovan, Charles, 112
- Doom Dooma Company, 166–167, 190
- Doom Dooma district, 94, 174
- Dramatic Performances Act 1876, 28
- Drayton, Richard, 17, 19–20
- dropsy, 97, 110
- drought, 84, 87
- Duars tea gardens, 112, 115
- Duncan Brothers and Co., 93–94
- Duplex (tea drying machine), 59
- Dutch East India Company (VOC), 37
- Dutch traders, 36–38
 dysentery, 97, 129
- earthquakes, 94
- East India Company (EIC), 18
 Assam politics and, 42, 46
 military fiscalism of, 1
 monopoly, 40–41
 penal law and, 25–26
 territorial rights, 37–38
- Eastern Frontier Rifles, 170
- ecological indeterminacy, 20
- ecology, 5–14, 194, 197
- economic crisis, tea industry, 52–54, 77, 174, 179–182
- economic order, 20
- economics, 165, 194, *see also* profits and profiteering, capitalism, income tax debates
 agrarian, 179–191
 co-dependency of forest and tea industry, 146
 forests and, 133–135
 health and, 99–104
 health-related costs, 104, 113
 labor costs, 179
 labor mortality and, 120–132
 pests and, 77–81
 price of rice, 127, 169
 price of tea, 121
 sanitary welfare costs, 114–115
- Edens, tea gardens as, 9, 18–22, 205
- Edgar, J. W., 138–141
- Edinburgh Botanic Gardens, 52
- education, 198
- Elliott, Sir Charles, 151
- Empire of India and Ceylon Tea Company Limited, 172–173
- Employment Review Committee, 200
- Engels, Friedrich, 101
- English superintendence, 75
- entomology, 22, 66, 87, 90, 201–203
 imperialism and, 81
- environmental history, 7, 24
- Environmental Protection Agency (EPA), 204
- epidemiology, 11, 19, 28, 33, 97, 130
 cholera, 105
 labor unrest and, 193
- Eraligul, 169
- ethnic demography, 3
- etiology, 97, 104–120, 129–130
 cholera, 104–110, 119
 kala-azar (black fever), 110–115, 119
 malaria, 115–119

228 Index

- European agrarian superintendence, 54–59
 European Economic Commission (EEC), 204
 European settlement, 60
 exchange-value, 71
 excise duty. *See* taxes
 exclusion, 101
 expertise, 50, *See also* scientific expertise
 export duties. *See* taxes
- F. L. Engledow Commission (1936), 201–202
 factory, 65, *see also* manufacturing
 fair-trade tea, 29–30
 Falconer, Hugh, 44
Family History of Chiang, The, 35
 febrility, 110
 Fee-Simple Rules (1862), 60, 139–141
 fermentation, 58
 fertilizers, 93, 95, 201, 203
 Fiji, 3, 205
 Finlay, James, 69
 firing process (drying), 58–59, 69
 timber and, 133, 145
 First Opium War, 1, 18, 32, 41, 49
 fiscal policy, 49, *see also* income tax debates
 fitness, productivity and, 103, 122, *see also* health
- Fletcher, J., 69
 flooding, 93, 95
 flushes, 57
 Food Controller, 179
 food supply, 172, *see also* rice
 Forest Department (FD), 6, 28, 33, 133–134, 143–164, *see also* silviculture
 Inspector-General (I-G), 143–147, 155–157
 jurisdiction, 144
 land claims, 142–143
 right-of-way and, 148–150
 forests, 9, *see also* legislative Acts
 ‘protected’, 161–162
 clearing of, 57, 197
 conservancy, 133–135, 139, 160–164
 economic aspects, 133–135
 health and, 80, 199
 private, 163
 reserved, 156–158
 unclassified state forests, 157–159
- Fortune, Robert, 52
 Foucault, Michel, 101
 Foulis, David, 59, 118
 Fraser, W. M., 94
 French Guiana, 3
 French travel accounts, 37
 fungus, 86
- Gait, Sir Edward, 14
 A History of Assam, 76
 Gandhi, M. K., 6, 14, 165, 188
 non-cooperation movement, 33, 165, 169, 174, 177–178, 192–194
 on capitalism, 178
 Ganges river, 171
 Gardner, Edward, 41
 Gasper da Cruz, Father, 37
 Gauhati (also, Guwahati), 105
 Gaya, 106
 Geographical Indication (GI), 29–30
 George III, 19
 germ theory, 110
 German Law (GL), 204
 Ghazipore tea estate, 83
 Ghosh, Durba, 23
ghundi pokas (green beetles), 92
 Ghyabaree tea estate, 92
 Gibbs (tea drying machine), 59
 Giles, George M., 112–114, 130
 Goaland, 169
 Goalpara district, 14, 48, 144, 145
 Golaghat, 86
 Gordon, G. J., 42, 45, 52
 Gorkhaland Movement, 29–30
 grazing, 157
 Great Tea Race, 39
 Griffiths, Sir Percival, 36, 40
 Griffiths, William, 43–45, 52
 Grove, Richard, 20, 30
 Gruning, John, 148–149
 Guadeloupe, 3
 Guha, Amalendu, 6, 17, 55
 Guha, Ramachandra, 161
 Guha, Ranajit, 60
 Gurkha Outrage, 172, 175, 192–193
 Guthman, Julie, 29
- Habib, Irfan, 40
 Haffkine, Waldemar M., 106–107, 130
 Hanley, Maurice, 82
 Hansara tea estate, 166
 Hardwar, 106
 Harrison, A. John, 158
 Harrison, C. J., 59
 Harrison, Mark, 98, 106
hartals, 175
 Harvard, F. V., 147
 Haywood, H. M., 175
 Hayworth (tea-rolling machine), 58

- hazira* (quantum or volume of work), 183, 184
- health, 26, 97–120, *see also* labor mortality
 body and, 101–104
 capitalism and, 102–103
 experiential, 102
 forest clearing and, 80, 199
 law and, 97–100
 laws, 120–132
 political economy of, 99–104
 productivity and, 103, 122, 124
 regulations, 103–104, 113, 120–132, 188
 wages and, 185
- Heeleeka, 201
- Henderson, T., 148–149
- herbicides, 199
- hill tribes, 42, 43, 45
- Hill, H. C., 156
- hoeing, 184–185, 201
- Holland, Philemon, 78
- homestead cultivation, 1
- Honduras, 12
- horticultural expertise, 49, *see also* scientific expertise
- House of Commons, 198
- housing, laborer, 124, 188
- Hukanguri garden, 167
- human management, 19, 33
- hybridization, 52–54, *see also* China-Assam
 hybrid tea
- hygiene, 26, 33, 122
- ideology, 198
- immigration, 120, 123, 124, 131
 disease and, 117
- Imperial Entomologist of India, 92
- imperialism. *See also* British Empire, colonialism
 agro-economic exploitation, 24
 bio-political, 18–25
 geopolitics, 51
 history of, 22–24
 legacy of, 3, 23–25, 33, 203–205
 trade rivalries and, 37–38
- improvement, 5, 7, 13, 24, 60, 76,
 198–200, *see also* modernity and
 modernization, progress
 authority and, 50
 disorder and, 20–22
 mechanization and, 67
 tea as, 14–18
- IMS. *See* Indian Medical Service (IMS)
- income tax debates, 32, 49–50, 60–76, *see also* legislative Acts
 fiscal context, 74
- litigation, 68–76
- indentured labor, 97
 end of, 191–192, 195
 health regulations and, 103–104, 131
 legislative acts on, 120
 migration, 3–4
 protests against, 166
 reproduction and, 117
- India
 early history of tea, 39–48
 postcolonial period, 196–205
 tea exports (1929), 195
- India, government of (GOI), 49
 export duties, 182
 land tenure policies, 141
 taxation debates, 62–76
 wage statistics, 184
- Indian Association, 127
- Indian Factories Act (IFA), 197
- Indian Forester*, 154
- Indian Medical Service (IMS), 105,
 112, 114
- Indian Mining Federation, 172
- Indian National Congress, 5
- Indian Penal Code, 170
- Indian Tea Association (ITA), 49, 130, 164
 authority of, 50–59
 fiscal crises and, 165
 labor unrest and, 175–176
 malaria investigation, 115
 pest management, 201
 recommendations on fiscal crisis,
 179–181
 taxation debates and, 60–76
 wage regulations and, 197
 wages and, 184
- Indian Tea Gazette, The*, 85, 155
- indigenous communities
 agrarian practices, 134
 disorder and improvement, 21
 forest dwellers, 160
 land tenure policies and, 136, 140
- indigo, taxes on, 61–62
- industrial, plantations as, 50–59, 196–197
- infant mortality, 127
- infection. *See also* etiology
 political trope, 165, 174
 routes of, 104–110
- influenza, 95, 193
- Inland Emigrants' Health Act 1889, 129
- Inland Revenue Commissioners v. Ransom*, 70
- Inner Line Regulation of 1873, 144
- insects, 200, *see also* tea pests
 use of term, 77
- Integrated Pest Management (IPM), 203

230 Index

- irrigation, 80, 116
 ITA. *See* Indian Tea Association (ITA)
 Italian travel accounts, 37
- Jackson (tea-rolling machine), 58
 James I, 38
 Jangalbari Rules, 140
 Japan, early history of tea in, 36
 Java, 46, 67, 89, 205
 Jefferson, Thomas, 29
 Jenkins, Francis, 14–18, 28, 43, 136–137
jhuming, 157
 Johnson, Luttman, 183
 Jorehaut Tea Company, 47
 Jorhat, 86
 Journal of the Agricultural and Horticultural Society of India (JAHS), 81
 jungle clearing, 81, 117, *see also* forests
 ‘jungle fever’, 110, 130
 jute, 66, 67
- Kacharis, 1
 Kadam (*Anthocephalus kadamba*), 155
 kala-azar (black fever), 9, 28, 33, 79, 97, 100, 111, 129–130, 199
 etiology, 110–115, 119
 mortality, 110
 treatment, 113
 Kamrup district, 48, 88–89, 144, 156
 Kangra, 89
 Karimganj district, 142, 169
 Katakhal Reserve, 153
 Kathmandu, Nepal, 41
 Keating Saw Mill, 153
 Kelman, Sander, 102
 Kenrick, H. B., 63–64
 Kenya, 202, 205
 Kew Gardens, 19
 Khamptis, 42, 43, 45
 Khamtis, 52
 Khilafat agitation, 169
Killing Valley Tea Company Ltd. Versus The Secretary of State for India, 68–72
 Kinmond’s (tea-rolling machine), 58
 Kirsch, Scott, 80
 knowledge economy, 6
 Koch, Robert, 106, 108
 Koliabar Tea Garden, 147
 Kumaon-Garhwal, 44
 Kumar, Prakash, 11, 62, 65, 75
 Kyd, Robert, 41
- labor. *See also* indentured labor
 global conditions, 192
 historians, 4
 permanent settlements, 117
 recruitment, 186
 representations of, 31–32
 skill and, 185
 Labor Enquiry Commissions, 6
 labor exploitation, 4, 13–14, 24, 26–27, 30
 labor history, 4–5
 labor impoverishment, 33, 101, 166, 178, 192, 199
 disease and, 105
 wages and, 169
 labor laws. *See also* legislative Acts
 fiscal crisis and, 180
 health rules, 120–132
 on sanitary welfare, 114
 penal provisions, 117, 121–122, 127, 128, 129, 190–191
 wages and, 182–191
 labor migration. *See* immigration
 labor mortality, 3, 9, 97–120, *see also* health
 administrative data on, 125
 Ceylon coffee plantations, 12
 diseases and, 33, 79, 110–111
 economic aspects, 120–132
 law and, 120–132
 living conditions and, 22
 rates, 6, 27, 107, 118–121, 123, 125–129, 126, 128
 labor unions, 165, 192, 198, 199
 labor unrest, 13, 19, 165–166, *see also*
 walkouts, protests
 1920–21, 166–172
 causes of, 166, 172–179
 government neutrality and, 176
 politics and, 176
 Lackwah Tea estate, 148
 Lakhimpur district, 48, 87–89, 118, 158, 159, 185, 190
 land grants, 17, 28, 136–141
 land revenue, 28, 60, 142
 land tenure policies, 60, 136–143
 landscape manipulation, 33
 landslides, 94
 Lansdowne (Viceroy), 157
 Latour, Bruno, 20–21, 79
 latrines, 110, 114, 127, 197
 Law, John, 79
 lawlessness, 21–22, 27, 190, 194, 195–199,
 see also disarray
 laws. *See also* labor laws, legislative Acts
 disorder and, 25–28
 public health and, 97–100
 Leasehold Rules of 1876, 60, 141, 145, 151

- Ledo, 150
 Lefroy, Harold Maxwell, 92
 legislative Acts, 6
 Labor Acts
 Act XIII of 1859, 121, 122, 190–191
 Act III of 1863, 120, 123
 Act VI of 1865, 120, 123, 182–183
 Act VII of 1873, 120
 Act I of 1882, 121, 124–125, 126–128, 130, 131, 183
 Act VI of 1901, 122, 129, 188, 190, 198
 Act XI of 1908, 122
 Act VIII of 1915, 188
 Act XII of 1920, 191
 Income Tax Acts
 Act II of 1886, 57, 60–63, 65, 75–76
 Income Tax Act VII of 1918, 182
 Income Tax (Revised) Act XI of 1922, 72
 Forest Acts
 Forest Act VII of 1865, 133, 147, 161
 Forest Act VII of 1878, 133, 144–145, 156–157, 161–162
 Assam Forest Regulation VII of 1891, 133, 145, 149, 156–159, 164
 Indian Forest Act XVI of 1927, 162
 Wasteland Acts
 Wasteland Rules of 1838, 60, 137
 Wasteland Rules of 1854, 150
 Wasteland (Leasehold) Rules of 1876, 60, 141, 145, 151
 Leishman, William, 112
 lime, 90, 201
 Liners Conference (1920), 182
 Linnaean taxonomy, 55, 78
 Linné, Carl, *Systema Naturæ*, 78
 Linschooten, Jan Hugo van, 37
 Linschooten's Travels, 38
 locked-up lands, 145
 Longai, 169
 Longai Valley, 142
 Longley, P.R.H., 92
 looper caterpillars, 77
 Lower Jiri Reserve, 153
 Lu Yu, 36
 Lum Qua (or Lumqua), 42, 45, 46
 Lumding, 104–105
 Lyall, C J, 87

 M'Clelland, John, 52
 M'Cosh, John, 48
 Macao, 36
 Macaulay, Thomas Babington, 25–26

 Mackenzie, 91
 Madras, 162
 Makai (*Shorea pennicellata*), 155
 Malacca, 36
 malaria, 9, 12, 28, 33, 79, 97, 100, 110, 129–130, 197, 199
 anopheles and, 93
 etiology, 115–119
 prevention of, 116–120
 malaria cachexia, 110–111
 Malaria Committee of the Royal Society to India, 112
 Malaya, 3
 malguzari forests, 163
 malnutrition. *See* starvation, nutrition
 Mandelslo, Johan Albrecht von, 40
 Manipuri tea, 86
 Mann, Gustav, 143, 146, 147, 151
 Mann, Harold H., 59, 86, 94, 201
 manufacturing, 57
 taxation and, 61–76
 Margherita, 150
 Martinique, 3
 Marwari kayas, 174
 Marx, Karl, 71
 Marxism, 101
 Marxist historiography, 13
 Masters, J. W., 56
 Mauritius, 3, 205
 McCabe-Dallas, Alfred, 112
 McClelland, J., 43–45
 McKercher, W. G., 72–73
 McPherson, J., 170
 McRae, W., 86
 mechanical know-how, 75
 Meckla Nadi Saw Mills, 158
 medical arrangements, 105, 115, *see also* health
 inspection of labor, 123–124, 127
 medical men, 103, 107
 medicine, scholarship on, 98–99
 Merchant, Carolyn, 18, 94
 Meyer, Sir William, 66
 microbes, 200
 microclimates, 85, 202
 middle-class, Assamese, 5, 15
 Mildmay, Walter J., 148
 Milligan, J. A., 72
 Mills, A.J.M. Moffatt, 14–18, 137–138
 Milroy, A. J., 152
 mineral resources, 150
 Minimum Residue Levels (MRL), 204
 minimum wage, 129, 183, 185, *see also* wages
 Misings, 1

232 Index

- Mitchell, Don, 80
 Mitchell, Timothy, 12, 205
 Mitter, B. C., 71
 modernity and modernization, 6, 13, 17,
 19–20, *see also* improvement,
 progress
 agrarian, 49
 colonial, 11
 human/nonhuman divide and, 20–21
 income tax debates and, 66
 tea industry and, 64–68, 76
 tea manufacturing and, 76
 Mohapatra, Prabhu P., 9, 117, 120
 mole cricket, 77
 Money, Edward, 53–58, 59, 70, 75–76
 monocultures, 51, 80, 85, 95
 pests and bugs, 22
 unsustainability of, 12
 monsoons, 82, 87, 182
 Mookerjee, Sir Asutosh, 69–71
 morbidity, 100, 103, 124, 131
Morning Post, 174
 mortality. *See* labor mortality, infant
 mortality
 Mughal Empire, 39–40
 Mullane, J., 127
 Muriel, C. E., 159
 Muttock tea tract, 42, 77
 mycologists, 201
- Nag, Hardayal, 170
 Nambor forest, 143, 150
 nationalism, 165, 192–194
 natural calamities, 94–95
 nature, as ecosystem context, 9
 Navigation Act of 1651, 37
 neem tree (*Azadirachta indica*), 92
neerikh, 185
 (rate for task-work), 183
 Nelson (tea-rolling machine), 58
 Neo-Han dynasty, 34
 Nepal, 5, 41
 Netherlands, 37, *see also* Dutch traders
 New Delhi, 200
New York Times, *The*, 3
 Non-Act Labor, 121, 125
 non-regulation, 21–25, *see also* disarray,
 lawlessness
 North Lakhimpur, 86, 94, 168
 North Sylhet district, 185
 Northern Sung dynasty, 35
Northern Whig, 177
 Nowgong (also, Nagaon, Nagoan), 48, 68,
 87, 118, 148, 190
 nutrition, 26, 118, 122, 127
- O’Callaghan, Mr., 168
 Old Assam Rules (1854), 60, 138, 163
 Olmstead, Alan L., 12
 opium, 17, 41
 organic farming, 29–30
 Orissa (now Odisha), 63
 Ovington, John, *Voyage to Surat*, 40
 oxidation, 58
- P.G. (‘practical gardener’), 55
 Pabhajan tea estate, 167, 174
 Pal, Bipin Chandra, 172
 Panama Canal, 12
 Pande, Radha Krishna, 169
 Panitola tea estate, 94, 189
 Paramaribo, 4
 Parsons, Talcott, 102
 pastoral visions, 29–31
 paternalistic theories, 189–190, 199
 Pathalipam estate, 168
 pathogen ecologies, 196
 Pattle, James, 42
 Paul, Sir G. C., 61, 70
 Peal, Samuel E., 81–85, 90–91, 93, 155,
 202–203
 peasants, 17, 136
 agriculture, 19
 forest conservancy and, 160
 protests, 134, 163
 settlements, 153, 157
 Pegu (Burma), 144
 penal code (IPC) of 1837, 25
 Penang, 45
 Pepys, Samuel, 38
 Permanent Settlement proclamation, 60
 pest ecology, 11
 pest management, 79, 200–205
 Bordeaux spray, 12
 knowledge networks, 89–96
 labor and, 84, 90
 pesticides, 22, 199, 202–204
 Petroff, Ivan, 37
 petroleum, 82, 150
 Pettenkofer, Max von, 109
 Phillimore, Sir Robert, 153
 phytochemicals, 204
 Pitt the Younger, 19
 plantation science, 11–12
 plantation-as-family discourse, 30
 planter violence, 3, 26, 28, 122, 196, 197
 Planter’s Raj, 5, 13, 18, 195
 planter-as-farmer, 30
 planters. *See also* Indian Tea Association
 (ITA), Assam plantations
 as monopoly capitalists, 142

- Assamese, 140
 authority of, 50–59, 75
 cholera etiology and, 107
 health regulations and, 103
 land grants, paternalistic favoritism and, 136
 legitimate authority and, 64
 taxonomy analogy, 55
 Pliny the Elder, *Historia Naturalis*, 77
 plucking, 69, 181–182, 185, 203
 politics. *See also* nationalism, protests
 global, 192
 Portuguese traders, 36–37
 postcolonial period, 196–205
 postcolonial theory, 23
 poststructuralism, 23
 poverty. *See* labor impoverishment
 power, 5, 11, 13, 23, 26, 49, 64, 79, 80, 131, 164, 197, 200, *see also* authority
 hierarchies of, 92
 of tax officers, 73
 power-relations, 196
 pregnancy, 124
 primitivism, 43, 69, 131, 198
 Prinsep, W., 47
 Privy Council, 71
 productivity, health and, 103, 122, 124
 profits and profiteering. *See also* economics
 disease and, 110, 114
 diseases and, 199
 pests and, 79
 quantity and, 179
 progress, 5, 13, 20, 76, 200, *see also*
 improvement, modernity and
 modernization
 proletarianization, 32
 prophylaxis, 130
 protests, 3, 31, 33, 165–179
 1920–21, 166–172
 by peasants, 134, 163
 causes of, 176, 192–194
 pest management and, 93
 wages and, 179–191
 pruning, 57, 86, 90, 203
 public health. *See also* health
 capitalist profits and, 98–104
 colonial power, 99
 scholarship on, 98–99
 vaccination and, 107
 public meetings, restrictions on, 170
 Public Works Department (PWD), 143
 quinine, 113, 115–116, 119
 race prejudice, 126
 racial ideologies, 75
 racial typologies, 45
 Raidang estate, 167
 rainfall, 78, 82, 86, 87–89
 pests and, 85
 Ramsay, G. C., 118, 199
 Ramusio, Giambattista, *Navigazione et Viaggi*, 36
 Rangarajan, Mahesh, 24, 162, 163
 Rappaport, Erika, 38
 Ratabari garden, 169
 RCLI, 198
 rebellion
 by Singphos, 46
 recovery, 19
 red spider (tea mite, *Tetranychus bioculatus*), 28, 77, 84–87, 88, 91, 202
 refinement
 ideology of, 75
 regulation
 profiteering and, 188
 Reid, D., 149–150
 Report of the Indian Industrial Commission (RIIC), 67–68
 reproduction rates, 117
 resistance, 19, *see also* protests
 resource management, 133–135, *see also*
 Forest Department (FD)
 respiratory disease, 97
 retrenchments, 186
 return-to-nature, 30
 Réunion, 3
 Revenue Authorities, 72
 Revenue Secretary, GOI, 156
 Rhode, Paul W., 12
 Rhodes, Father Alexander de, *Voyages et Missions Apostoliques*, 37
 Ribbentrop, Berthold, 157
 rice
 cultivation, 15, 117–118
 for workers, 167–168
 mechanization processes and, 67
 price of, 127, 169
 provided by planters, 188
 riots, 3, 32
 Rogers, Sir Leonard, 111–112, 115
 rolling and rolling machines, 58–59, 69
 Rosenberg, Charles, 130
 Ross, Sir Ronald, 112, 115
 Roy, Tirthankar, 74
 Royal Commission on Agriculture in India (RCAI), Evidence Taken In Assam, Vol. V, 72

234 Index

- Royal Commission on Labor in India (RCLI) 1930, 196–199
 Royle, J. Forbes, 44
 rubber extraction, 157
 ruination, sociology of, 203
 Rupacherra tea garden, 149
 rupit (wet-rice cultivating) lands, 15
 Russian tea consumption, 179
 Russian travel accounts, 37
ryots, 136, 137, 138, 141, 147, 149
- Sadiya, 43, 46, 119
 ‘saheb’s disease’
 Saikhowa, 45
 Saikia, Arupjyoti, 143, 150, 152, 153, 157
 sāl (*Shorea robusta*), 142, 143, 148–149, 156, 160
 Salona Tea Company, 148
 salt, 90
 sam (*Artocarpus chaplasha*), 144, 155
 Samdang garden, 167
 sanitarians, 103
 sanitary commissioners, 107–110
 sanitary conditions, 105
 cholera and, 109
 kala-azar and, 114
 profits and, 121–122
 Sanitary Department of GOI, 105
 sanitary measures, 26, 122, 124–125, 128, 131, 188
 ‘sarkari bemari’ (British Government disease), 110
 saw mills, 154
 Schiebinger, Londa, 44
 Schlich, Wilhelm, 143
 scientific expertise, 11, 22, 51, 66
 China-Assam hybrid tea and, 44–46
 ideological authority and, 49
 pest management, 29, 78, 89–96, 201–204
 practical know-how and, 46
 vetting Assam tea, 43–44
 scientific propriety, 110
 scientific rationality, 19
 scientific triumphalism, 32
Scinde (ship), 97
 Scott, Beatrix, 91
 Scott, David, 14, 42
 secessionism, 3, 200
 Sen, Ram Comul, 42
 Sewell, Henry, 18
 sexual violence, 26
 shade, 81, 87
 Sharma, Jayeeta, 15
 Empire’s Garden, 24
 Shen Nung, *Pen ts’ao*, 34
 Shibpur, 41
 Short, Thomas, 38
 Sialkot, 106
 Sibsagar district, 48, 81, 82, 115, 144, 145, 148, 168, 185
 Sigatoka fungus, 12
 Sigmond, G. G., 35, 48
 silviculture, 28, 33, 134–135, 139, *see also* forests
 Sim, G. G., 72
 Simul tree (*Bombax malabaricum*), 154–155, 158
 Singapore, 45
 Singha, Purandhar, 42
 Singha, Radhika, 26
 Singha, Raja Purandhar, 46
 Singpho tea tract, 77
 Singphos, 42, 43, 45–46, 51
 Sirocco (tea drying machine), 59
 site selection, 116, 119
 Sivaramkrishnan, K., 135, 160
 slavery, 4
 Smythies, A., 154
 social agency, 79
 social inequality, 101
 soil conditions, cholera and, 109
 Sola forest reserve, 148
 Soluri, John, 10
 sources, elite, 32
 Spivak, Gayatri, 31
 Spry, H. E., 72
 Sri Lanka, 202, 205, *see also* Ceylon
 standard of living, 198
 starvation, 169–170, 176, 193, *see also* nutrition
 Stoler, Ann, 204
 Straits Settlement, 45
 Strickland, C., 116–119, 130
 strikes, 166, 175
 Stuart, C. P. Cohen, 36
 subaltern consciousness, 31
 subsistence wages, 186
 sugar industries, 63
 Sung dynasty, 36
 Surinam, 3–4
 Surma Valley, 48, 140, 142, 158, 165, 168, 172, 175, 176, 181
 tea quality, 185
 wages, 186
 Sutter, Paul, 12
Swargadeos (Ahom god-king), 15
 Sylhet district, 14, 48, 118, 165, 168–169, 177

- Taiwan, 202
 Talish, Shihabuddin, *Fathiya-i 'Ibriya*, 40
 taxes, 14, 17, 196
 agriculture and, 60–76
 apportionment, 61, 65, 71–76
 evasion of, 22
 excise duty on opium, 17
 excise duty on tea, 38
 export duty, 72, 182
 import duty on tea boxes, 72
 on petrol, 72
 tea-box royalty, 159
 taxonomy, 78
 tea. *See also* Chinese tea, China-Assam
 hybrid tea, Assam tea
 as Britain's national drink, 38
 as leaf, 50, 74–75
 botanical origins, 36
 circulation and exchange, 36–39
 cultivation process, 56–57
 early history of, 34–44
 indigenous, as wild, 51
 introduction to Europe, 36–37
 manufacturing process, 57–59
 medicinal aspects, 35, 37
 production (yields), 87–89, 88, 168,
 179–182
 quality, 181, 185
 tea aphids, 77, 82–84
 'Tea as Progress', 16
 Tea Board, 29
 Tea Committee, 17, 42–45, 52
 agrarian colonization and, 136
 Tea District Labour Association, 170
 tea experts, 66
 tea gardens. *See* Assam plantations
 tea grub, 92
 tea industry
 after World War I, 195–200
 agro-economic problems, 77
 crop output guidelines, 181–182
 downturn in, 121
 during World War I, 179
 economic crisis, 52–54, 174,
 179–182
 market rivalry, 76
 modernity and, 66–67, 76
 production levels, 165
 recession, 140–141
 tea juice, 84
 tea mite. *See* red spider (tea mite,
 Tetranychus bioculatus)
 tea mosquito bug (*Helopeltis theivora*), 28,
 77, 78, 81–84, 83, 90, 201–202
 tea pests, 6, 9, 22, 28–29, 32, 77–96, 197,
 199, 200–205, *see also* pest
 management
 economic aspects, 77–81
 species in northeast India, 85
 tea plant (*Camellia drupifera*), 42
 tea plant (*Camellia sinensis* var. *assamica*), 1
 tea plant (*Camellia sinensis*), 34, 64, 74
 tea-boxes, 133–134, 141, 145–146,
 153–159
 teak (*Tectona grandis*), 133, 143, 160
 tea-rolling machines, 58
 technical know-how, 75
 Terai region, 201
 Tezpur division, 143
Thea Bohea, 46
 Thiselton-Dyer, Sir William Turner, 55
 Thompson, E. P., 31
 Thompson, Edgar, 75
 Thompson, W. J. & H., 47
 thrips (*Scirtothrips dorsalis*), 77, 86–87
ticca (piece-work), 168, 176, 183, 185,
 187, 188
 Tikak, 150
 timber, 142, *see also* forests
 local use of, 144
 marketability of, 156–157
 revenue, 150–151
Times (London), 179
 Tinker, Hugh, 4
titapani, 92
 tobacco, 7
 Tocklai, 201
 trade rivalry, 37–38
 transplanting, 57
 travelers, 36, 51
 Travers & Sons, 47
 tripartite moral economy, 30–31
 Twining & Co., 47
 Uekötter, Frank, 9
 Ukers, William, 34, 46
 unit system, 183
 United States
 agricultural innovation, 12
 organic agriculture, 29
 United States Patent office, 56
 unkemptness, 19, *see also* disarray
 unrest. *See* labor unrest
 unruliness, 21
 Upper Assam Tea Company, 143
 Upper Burma Regulation of 1887, 157
 use-value, 71
 Uttarakhand, 44

236 Index

- vaccination, 107, 125, 127, 130
 Venesta box, 155
 Vetch, H., 15
 Victoria (tea drying machine), 59
 Vidyaratna, Ramkumar, *Kuli Kahini*, 82
 violence, 13, *see also* planter violence,
 sexual violence
 against laborers, 170
- wages, 9, 27, 117, 121, 174
 differential wage structure, 181–191
 labor demands, 172–179
 labor recruitment and, 186
 labor unrest and, 194
 regulation of, 197
 statistics, calculation of, 187
- walkouts, 3, 32, 165
 1920–21, 166–172
 causes of, 166
 government response to, 175–177
 wages and, 176, 186–191
- Wallich, Nathaniel, 42–43, 52, 136
 Ward, Sir William, 150, 152
 Wasteland Rules of 1838, 60, 137
 Wasteland Rules of 1854, 150
 Wasteland Rules of 1876, 151
 wastelands, 28, 93, 133
 availability of, 152
 colonization of, 136–143
 forest cover, 147
- water supply, 108–110, 113, 114, 124
 water-borne theory of cholera, 105, 107
 Watson, Sir Malcolm, 119
 Watt, Sir George, 90, 203
 weather. *See* climate
 Webb, Charles, 82
- weeds, 200, 203
 welfare provisions, as concessions,
 188–190
 wellness, 103, *see also* health
 West Bengal, 200
 Wheeler, Sir Henry, 175–176
 Report, 177
 White violence, 25–26, *see also* planter
 violence
 White, J. Berry, 46, 54
 Whitt, Laurelyn, 51
 wilderness, 7
 wildfires, 95
 withering, 57–58, 69
 women, 30
 reproduction, 117, 124
 wages, 183, 185
- wood, use in tea industry, 153–159, *see also*
 timber, tea-boxes
 woodlands, 28
 Wood-Mason, James, 82–87, 90, 203
 Woodroffe and Evans (W & E), 61–62, 70
 worker solidarity, 192–194
 working conditions, 57, *see also* labor
 impoverishment, labor laws, wages,
 protests, sanitary conditions
 protests against, 172–179
 World Health Organization (WHO), 204
 Wyndham, W. Y., 201
- Yalysheff, Boornash, 37
 Young, T. C. McCombie, 114–115
 Yunnan, 42
- zamindars*, 157, 160, 163
 Zimbabwe, 202