

1952

Locust swarms had posed an existential threat to Chinese farmers for centuries, and the imperial state's efforts to control them relied on the mobilisation of rural labour. Though post-imperial states were aided by the development of pesticides and a better understanding of locust bionomics, locust control remained labour-intensive late into the twentieth century. In the early 1950s, the newly established People's Republic of China drew on both old and new methods to fight infestations, transforming in the process the way labour was mobilised and organised in significant and far-reaching ways. This essay looks at the role of labour in the 'First Patriotic Locust Extermination Campaign' of 1952 and beyond.

The First Patriotic Locust Extermination Campaign: Rural Labour Mobilisation and Pest Control in the Early People's Republic of China

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Catastrophic locust damage was a feature of Chinese agricultural history until the late twentieth century.¹ Between 1950 and 1952, the state mobilised an estimated 120 million labourers to fight insect pests over thirty-six million hectares.² In Hebei Province, nine locust extermination campaigns (灭蝗大战役) employed forty aircraft and millions of farmers as the People's Republic of China (PRC) built on late-imperial and Republican era practices to physically and discursively mobilise rural labour for pest control in new ways.³ Although these efforts demonstrated features of ideology and organisation central to the mass campaigns of the Maoist era, those features were far less important for the eventual suppression of the locust threat than were pesticides and land reclamation. In fact, reduction of labour was from the outset a central goal of locust-control planning for both ideological and economic reasons.⁴ To state entomologists, mass mobilisation was not an optimal choice, but rather one dictated by necessity.

The local cadres organising villagers into locust-fighting battalions inherited a long tradition of state practices conscripting peasants into war against orthopteran invaders. Shang oracle bones (ca. 1250–1045 BCE) and Western Zhou (1045–771 BCE) texts reference locusts, and detailed accounts of catastrophic infestations appear in official Han histories.⁵ To fight them, imperial states relied on methods requiring intensive mobilisation of rural labour. After twentieth-century entomologists uncovered the mechanism by which devastating swarms appeared, modern states began to permanently dismantle it through environmental transformation of breeding grounds. In China, the threat of truly catastrophic swarms was largely eliminated by the 1970s.⁶ The campaigns considered here transpired towards the beginning of that closing chapter, at the dawn of the People's Republic. Though they showed great operational continuity

with locust-control methods in both the Republican and the late-imperial eras, they also applied new methods to the age-old struggle. Chemical pesticides superseded trenches and nets as frontline defences, while the development of spraying techniques reduced the labour required to apply them. Organisationally, the campaigns demonstrated the state's capacity to mobilise labour with an efficacy far surpassing its predecessor and drew heavily on the wartime experience of the Communist-base areas. In terms of scale and technique, these mobilisations foreshadowed the mass campaigns of the 1950s and 1960s.

Locust Disasters in Imperial Times

By 1949, locust disasters (蝗灾) had been recorded in China for thousands of years. Customarily ranked third after flood and drought in local histories' taxonomy of catastrophe (灾), they held a particular significance in political discourse. By the time of the Han Dynasty (206 BCE – 220 CE), political elites construed them as Heaven's response to immoral governance, and, despite the scepticism of a few notable critics, this remained a prominent interpretative frame through the late-imperial period.⁷ Rural society also associated locust plagues with divine will. The earliest rites relating to agricultural spirits included prayers for their prevention, while popular belief in much of the imperial period attributed them to the Insect King (虫王) or similar deities.⁸ In the Ming (1368–1644) and Qing (1644–1912) eras, temples to locust-quelling deities proliferated based on the belief that, if gods caused outbreaks, they could also control them.⁹ These popular beliefs often prohibited human interference with the swarms and came to be regarded by local officials, modern entomologists, and twentieth-century revolutionaries alike as the epitome of self-defeating peasant superstition.¹⁰ Though many cultures associated locust plagues with divine punishment, in China, such events had distinct political implications that persisted long after modern revolutionaries vanquished their supernatural aura.¹¹ This was because a basic measure of an imperial state's legitimacy had always been its capacity to perform disaster relief. Shorn of divine connotations, this premise remained a core principle of the modern state, which therefore assumed responsibility for locust control.

Locusta migratoria manilensis, the species common to northern China, goes through five developmental phases, or instars, between hatching and taking flight, and a population's stage in this process greatly influenced control measures. Depending on the growth rates of eggs, nymphs, and

adults, a year might see four generations depending on several climatic and ecological variables. Northern China typically experienced two generations in an outbreak year, known as 'summer' and 'autumn' locusts. A single summer locust could lay more than 1,000 eggs, and an autumn locust almost 600; eggs laid in autumn survived the winter to hatch the following year.¹² Different developmental stages necessitated different control methods. Eggs laid in the ground could be destroyed by ploughing or harrowing, which either buried them more deeply or exposed them to the elements. But oviposition often transpired unwitnessed on reedy, uncultivated land where labour was in short supply. Newly hatched nymphs were the easiest to destroy, since they were smaller and less mobile than later instars. Nymphs aggregated in ever-larger bands as they sought food supplies, and the traditional control method was to dig trenches in which the bands could be buried or drowned.¹³ But trenches had to be strategically placed, and wide and deep enough to prevent bands crossing or escaping. Fully fledged adult locusts in fast-moving swarms were the hardest to battle since, to save crops, they had to be scraped off vegetation before they consumed it.¹⁴ Fire could be employed but was a last-ditch possibility usually reserved for uncultivated land. All of these techniques required an immense application of labour that had to be mobilised by the state.

Usually, the state placed this burden on local officials.¹⁵ According to the history of the Song Dynasty, the court recruited commoners to dig up thousands of dan of eggs in Zizhou in 1034.¹⁶ In 1075, it made county magistrates and subprefectural officials responsible for locust suppression, empowering them to exchange bounties of grain or cash for destroyed insects.¹⁷ Qing Dynasty regulations elaborated these principles in ever-greater detail over the eighteenth and nineteenth centuries.¹⁸ The Republic continued them. In 1934, the Nationalist government issued the 'Outline of Locust Control Methods', providing county officials with a detailed schedule of locust-control responsibilities, including appointing locust-control inspectors and disseminating propaganda to educate farmers about the insect threat.¹⁹

Though official and unofficial sources provide ample examples of such regulations, the degree to which they were enforced is difficult to discern. Locust-control work removed farmers from other agricultural tasks and, unless their own fields were directly threatened, they had little incentive to engage in the backbreaking labour required for control efforts, especially if they believed it might invite divine retribution. Hence the necessity of

bounties, which essentially functioned as piece-rate wages. But here the state faced another quandary, since incentive programs provided ample opportunities for corruption. Though local officials paid the bounties from state granaries established for famine relief, they bore all the other costs of control efforts. This requisition of funds and labour, in turn, provided opportunities for exploitation. Thus, on the one hand, local officials who overlooked basic locust-control work endangered farmers' livelihoods through neglect; on the other, the lictors and yamen runners sent to muster them could be as rapacious as the locust swarms themselves. Qing laws and edicts meant to address these problems make clear their significance.²⁰

Learning from the Republican Era

Although the Republican era (1912–49) saw the rise of scientific entomology and a modernist ruling elite that rejected the supernatural connotations of locust plagues, the state's ability to manage outbreaks remained an indicator of political legitimacy. In spite of the creation of entomological bureaus charged with controlling insect pests, Republican regimes lacked the capacity to effectively mobilise the rural populace to either prevent or manage outbreaks. Republican locust-control efforts often faced rural resistance stemming from multiple causes: popular beliefs about divine intervention, banditry in provincial border regions, and a distrust of predatory local officials.²¹ The Japanese occupation of northern and eastern China effectively ended Nationalist locust-control programs and prevented any coordinated response from the various forces vying to control the countryside. (Locusts, of course, ignored territorial boundaries.)

In 1943, human and environmental factors converged in an unprecedented locust disaster that ravaged provinces across the Yellow River floodplain.²² Witnesses reported seething runnels of nymphs flowing unimpeded through villages and over compound walls, while the sky turned yellow with multiple crisscrossing swarms.²³ During the crisis, Communist cadres in Henan's Taihang Revolutionary Base Area pioneered the organisational techniques that informed later campaigns in the PRC. Forced to rely on the labour-intensive catch-and-kill methods described above, they developed an administrative structure of locust-control organs extending to the village level. They also conducted extensive propaganda efforts to counter religious beliefs discouraging human intervention and develop an ideological consciousness that elevated communal over indi-

vidual interests. Finally, they consciously employed military metaphors and modes of organisation that explicitly linked anti-locust campaigns to wartime struggle.²⁴ These efforts provided the fundamental blueprint for the later campaigns and vital experience in conducting them. In the process, the Party gained political legitimacy among the rural populace as it honed its capacity to mobilise them.

Hebei's Locust-Control Army

As the events in Ji County, Hebei, showed, that experience would prove valuable in the early 1950s, when a series of major outbreaks confronted the nascent People's Republic. Each year of that decade brought damaging swarms to the province, but those in 1951 and 1952 were especially intense.²⁵ Ji County was on the northern edge of the Yellow River floodplain's breeding zone and contained the Qingdian and Taihe basins, two low-lying depressions (洼) larger than 10,000 acres (4,000 hectares) apiece, where floodwaters routinely left vast expanses of standing water that evaporated slowly. The soft soil left behind was optimal for oviposition and rapid vegetation growth provided plenty of sustenance for newly hatched nymphs. A local saying held that Qingdian basin flooded nine years out of ten—and the dry year brought locusts.²⁶ Under the Yuan, Ming, and Qing dynasties, multiple catastrophic outbreaks occurred. The worst infestation of the Republican era was in the autumn of 1929, when villagers went into the fields before dawn for days on end to pluck sluggish insects from corn and sorghum—and still lost 40 percent of the crop.²⁷

During the rainless spring and summer of 1951, evaporation exposed 13,000 acres (5,300 hectares) of basin land. As another local proverb said: 'Flood first, drought after, grasshoppers cover the area' (先涝后旱蚂蚱成片).²⁸ Towards the end of June, a sheet of insects more than 1.5 miles (2.4 kilometres) long and one-third of a mile (half a kilometre) wide draped approximately thirty locusts per square foot (929 square centimetres) across the Qingdian basin, spurring local cadres to form a Locust Suppression Joint Defence Committee. An emergency bulletin released on 25 June directed affected villages to provide no less than 30 percent of their available manpower for an extermination campaign commencing immediately.²⁹ By the end of the month, eight of the county's nine districts reported locusts covering 100,000 mu (about 6,600 hectares) of land. As Qingdian village's Party branch secretary Wu Cunchong recalled, 'buildings and courtyards were coated in bugs, everyone's windows were

devoured, and they flowed across the ground like water—you could step on twenty or thirty with one foot.³⁰

On 1 August, local leaders ordered the mobilisation of 17,000 to 20,000 villagers. They suspended primary school classes in seven districts to free up teachers and older students, and required the participation of all able-bodied citizens, declaring the undertaking a 'political duty' (政治任务) required to prevent losses affecting thousands of livelihoods. Within two days, more than 14,000 people assembled to form a Locust-Control Army (治蝗大军) that, as the name implied, took the form of a military organisation. Each district created 500-person locust-control battalions organised into brigades and squads. The district chief or Party secretary commanded the battalions from a central command post, and assigned them communications, hygiene, and propaganda officers.³¹

Through August, this army faced the orthopteran onslaught using a combination of traditional tactics and new methods. Trenching units dug ditches sixty centimetres wide every 100 metres, then buried the insects herded into them by capture squads. In other cases, brigades surrounded the insects, driving them to interment in massive pits. Teams in uncultivated areas hacked weeds and brush to encircle the insects and then ignited it. Some teams led donkeys pulling rollers to crush the locusts. On 7 August, the Locust-Control Army was reinforced with 750 kilograms of '666' pesticide and sixty sprayers, which increased extermination rates so dramatically that Beijing sent an additional 5,000 kilograms by the end of the month.³² But, along with the insecticide came orders for continued mobilisation, so local cadres also resorted to more traditional tactics to keep the campaign going, offering a bounty of one jin of corn for every three jin of locust carcasses. They mobilised more than 20,000 people in the first week of August; thousands more joined the effort before it concluded at the end of the month.³³ The local history stresses the zeal of the masses and the energetic leadership of local cadres. It is less forthcoming regarding the total number of insects killed or crops saved, but clearly the swarms were not prevented from reproducing, since they returned in force the next year.

The First Patriotic Locust Extermination Campaign

Indeed, 1952 saw an even greater mobilisation of human and discursive resources across the country to fight the greatest insect crisis the PRC had faced. The Bureau of Agriculture issued an emergency bulletin

on 3 June. Observing that early appearing nymphs already threatened hundreds of thousands of mu in Hebei, Shandong, and northern Anhui, it warned that, if they were not destroyed within weeks, the damage to summer harvests would be compounded by the subsequent generation of autumn locusts: 'At this critical juncture each locale must earnestly grasp the situation, organise the strength of the farmers, and exhaust every method to thoroughly exterminate them.'³⁴

The Qingdian basin was an early hotspot. County leaders scrambled to mobilise nearby farmers on 15 May. A week later, they summoned more distant villagers to form 'expeditionary teams' (远征队), declaring that locust-control efforts superseded all other activities. They also organised more than 1,000 able-bodied adults into mechanised dusting teams for the dispersal of the 666 insecticide.³⁵ At the end of the month, Beijing sent more manpower and supplies to help conduct what was termed the 'First Patriotic Locust Extermination Campaign' (第一次爱国灭蝗战役). It seems likely that pesticide was being improperly prepared and applied by inexperienced cadres and farmers, since the reinforcements were led by locust expert Chen Jiexiang and included an additional nearly 35,000 kilograms of spray and 437 sprayers.³⁶

As the first campaign commenced, locusts infested more than 128,000 mu (8,500 hectares) at a density of up to 120 insects per square foot, with three-fifths of them in the fourth or fifth instar. On 3 June, the 10,000 men and women of the Locust Extermination Expeditionary Army (灭蝗远征大军) began trenching and encirclement operations, while trucks pulled rollers to crush insects. After three days of arduous effort under the slogan 'To patriotically increase production, we must resolutely exterminate the locusts to keep them from becoming a disaster' (为了爱国增产, 坚决要把蝗虫消灭, 不使成灾), the campaign concluded and most participants returned home. Unfortunately, the overall acreage of infestation had actually *increased*. Locust-control headquarters thus ordered a second campaign, mobilising 43,000 people from five districts.

As in its depiction of the first campaign, the local history emphasises the fervour of the masses: a fifty-six-year-old woman demanded to join the pesticide teams, while residents of one hamlet slept on desks in the village school so that recruits from distant areas could use their lodgings. By 13 June, the infested area had dropped slightly to 124,530 mu (8,200 hectares), and cadres decided a third campaign was necessary. More than half of the 10,000 people mobilised were women or students. To emphasise that the success of the campaigns was due to the coordination

of provincial, prefectural, and district resources, as well as the education and encouragement of the masses, the history quotes one villager's emotional exclamation: 'It's the People's Government that found a way. Before, everyone said they were "spirit insects" and that the more you fought, the more they came—but it's really that the more you fight the less there are. What past dynasty ever did such good things for us?'³⁷

Though these early anti-locust struggles essentially ended in stalemate, they nevertheless prevented extensive damage. And yet, while pitched battles might keep a disaster from turning catastrophic, the caloric and economic value of crops always had to be measured against the energy and resources expended to save them. But what is significant about these early efforts is the degree to which the state was able to effectively mobilise the populace—and this is the point emphasised in nearly all accounts. As the doyen of twentieth-century locust control, Boris Uvarov, wrote: 'The success of an anti-locust campaign can always be guaranteed on the sole condition that the campaign is properly organized ... and in some cases even second-rate technical methods may give better results owing to good organization.'³⁸ These campaigns, moreover, informed the organisation of early detection regimens that greatly improved the state's ability to prevent or control outbreaks by the end of 1952.³⁹

Between Maoist Radicalism and Technocratic Expertise

Sigrid Schmalzer has argued that early PRC agricultural policy not so much careened between poles of Maoist radicalism and technocratic expertise as integrated them in the pursuit of socialist ideals through scientific farming. PRC locust-control policies in the 1950s and 1960s support this claim. Though Maoist ideology privileged the conventional wisdom of the rural masses over the ostensibly colonialist outlook of foreign-trained scientific elites, in the most radical periods, the intent was to dialectically integrate these approaches into a unified sensibility embodying the ideals of the new society rather than establish a hegemony of the former through obliteration of the latter.⁴⁰ Nor, at least in the case of locust control, was this dualistic approach unprecedented. After all, Ming literatus Xu Guangqi (1562–1633) credited his pathbreaking 1630 description of *Locusta migratoria's* lifecycle to accounts gathered from elderly farmers.⁴¹ The exterminationist rhetoric, on the other hand, was a feature of modern applied entomological discourse.⁴² And, while cultures across the centuries have commonly likened the struggle against locusts

to warfare, the Communist Party's intentional construction of locust control as military campaign grew directly from wartime experience and reflected the organisational and discursive militarisation of mass campaigns in general.

From the vantage point of rural labour history, the early PRC's locust-control campaigns exhibited significant continuities with both a deeper and a more recent past. Many of the operational and organisational techniques deployed in the campaigns had deep antecedents in China's 'feudal' history, including the notion that the mobilisation of labour for prevention, control, and disaster relief was a fundamental state responsibility. It is significant that early in the era of the voluntarist mass campaigns that were such a hallmark of Maoist policies, the state also relied on traditional material incentives to get farmers to fill bags with locust carcasses. The efforts of Ji County Party officials to mobilise farmers to dig up locust eggs in the spring and autumn hearkened back to agricultural manuals and dynastic regulations from the imperial era that mandated such activities, as did their policy of providing cash rewards or grain at egg-purchasing stations.

Other aspects of the early 1950s campaigns stemmed from precedents established in the recent past: both the mode and the discourse of wartime organisation derived from the experience of control campaigns conducted in the Henan base areas during the anti-Japanese resistance. These, of course, came to be emblematic of the Maoist-era mass campaign and also signified the new reach and prerogative of the modern nation-state. What was once a tax obligation was now a patriotic duty inculcated through ideological education analogising orthopteran and foreign invaders.⁴³ Where county magistrates once dispatched yamen runners and cajoled village heads, the Party now deployed village cadres to muster farmers with an organisational efficiency that reflected the unprecedented penetration of local society by the Party-State. Given the crucial importance of the locust-control campaigns in the development of the state's capacity to mobilise rural labour, it is somewhat ironic that the reduction and elimination of large-scale labour mobilisation were from the outset central goals of locust-control planning, and the main impetus for the intensification of pesticide use in the 1950s.⁴⁴