

# Pollution Relief and the Japan Woman's Christian Temperance Union

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In May 1899, *Fujin shimpō*, the monthly periodical of the Japan Woman's Christian Temperance Union (JWCTU), printed a copy of the organization's rules, which included the following statement of purpose:

This organization aims to expand work to end drinking and smoking, to reform social customs, morals, education, health, and general evils, and to promote the welfare and happiness of all of society.<sup>1)</sup>

In pursuit of these multifarious goals, members of the organization engaged in a wide array of activities. For example, they supported bills to ban underage drinking and smoking, opposed the participation of *geisha* in state ceremonies, and protested the new construction and rebuilding of brothel districts. They also distributed temperance tracts and Bibles among soldiers and sailors fighting in the Russo-Japanese War and annually submitted petitions to the National Diet calling for the regulation of Japanese prostitutes overseas and the revision of specific clauses in both the civil and criminal codes that discriminated against women and contravened the principle of monogamy.

The few histories of Meiji-period women's movements that discuss the JWCTU focus on these latter activities and, as a result, depict the organization as primarily an anti-prostitution group. As the 1899 statement of purpose alludes to, the JWCTU and its members had a much broader social agenda. Indicative of this breadth and of the fact that members wanted more than just cosmetic social change was the activism they displayed in response to problems caused by industrialization, most notably copper contamination by the Ashio mine in Japan's first major environmental pollution incident. The purpose of this study is to shed light on this activism and its effectiveness. An overview of the mine's history, the problem of copper pollution, and the opposition movement will serve as a useful prelude.

## A History of the Ashio Mine and Copper Pollution

The Ashio copper mine, permanently closed since 1973, is located at the headwaters of the Watarase River, just southwest of Nikko in Tochigi Prefecture.<sup>2)</sup> This mountainous region first became known for the wealth of its copper deposits in the early 1600's, and, over the ensuing two centuries, private individuals and the *bakufu* engaged in extensive mining and refining activities. Domestic usage included the minting of coinage and the molding of roof tiles, most notably for Edo Castle and Toshogu Shrine, the Nikko mausoleum constructed in the 17th century to honor

Tokugawa Ieyasu. Moreover, as a key export commodity, Ashio copper helped to fuel trade with China and Holland.<sup>3)</sup> Excessive mining, however, greatly diminished ore reserves, particularly those most accessible. Production levels fell as costs rose, and, by the end of the Tokugawa period, limited operations consistently ran at a deficit.<sup>4)</sup>

In the Meiji period, the mine enjoyed a remarkable turnaround, for which credit belongs to Furukawa Ichibei. Born into a Kyoto merchant family, Furukawa purchased the mine in 1877 with financial backing from industrial pioneer Shibusawa Eiichi, among others.<sup>5)</sup> His early concentration of capital on deep tunneling led to the discovery of tremendous new ore reserves, which increased the mine's output by more than tenfold in the first decade of his ownership. His subsequent signing of a lucrative contract with Jardine-Matheson & Company and promise to provide a quantity of copper far exceeding current production levels necessitated the further rapid development of the mine. Reinvesting his windfall in the mine, he embarked on a massive modernization program that included the latest in mining and refining technology from the West. The cornerstone of this program was the construction of a hydro-electric plant to provide electricity for drills, lights, and a railroad, the latter of which greatly facilitated the transport of supplies and ore and reduced costs. Production continued to soar, and, by the early 1890's, approximately 40% of all of Japan's copper came from the Ashio mine.<sup>6)</sup>

Furukawa's resurrection of the mine did not proceed without problems. Quite to the contrary, the expansion of copper production took place at great expense to the natural environment and to residents of the northwestern Kanto Plain. The Watarase River, which flows through Tochigi and Gunma Prefectures before merging with the Tone River on the Saitama-Ibaraki border, had long been a key to local economic prosperity. Thousands of households subsisted on the abundance of fish to be caught, and the purity of the Watarase's water had made silk weaving a lucrative secondary occupation. Annual flooding by the river after typhoon season and the melting of snow had also resulted in the regular transference of leaf mold from the floors of the mountain forests to the plain's fields. These floods had provided farmland with a natural fertilizer, which had boosted harvests and given the region "one of the highest cereal yields in the whole of Japan."<sup>7)</sup>

The indiscriminate deforestation of roughly forty square miles of mountain cover, which Furukawa pursued in the late 1880's to supply the mine's expanded lumber needs, altered the beneficent nature of these floods.<sup>8)</sup> With the forest land increasingly unable to absorb moisture or to provide leaf mold, the floods gained in volume at the same time that they lost their fertilizing properties. More significantly, the persistent dumping of toxic waste materials exacerbated the newly destructive capability of the river. The floods now deposited not fertilizer but soil containing harmful industrial compounds such as sulphuric acid, aluminum oxide, magnesia, chromium, and arsenic.<sup>9)</sup> Evidence of the ecological havoc wrought by the mine surfaced shortly after Furukawa assumed ownership. As early as 1878, the water in the Watarase took on a strange hue, fish began to die mysteriously, and those who spent much time wading through the familiar waters developed sores on their feet. These initial signs escalated to the near extinction of marine life in the Watarase and Tone Rivers and the rotting and withering away of newly planted crops. Local residents suffered not only from the

destruction of traditional means of securing a living, but also from health problems. Eye disease proliferated, and a growing number of new mothers failed to lactate. More devastating potentially to the long-term viability of individual families and communities was a sharp increase in the region's infant mortality rate.<sup>10)</sup>

### **The Opposition Movement**

Severe flooding in the late summer of 1890 revealed for the first time how destructive the Watarase had become. These flood waters laid waste to crops in both Tochigi and Gunma and, as discussed above, left in their wake a layer of contaminated topsoil that made planting new seedlings futile. An abiding suspicion that the Ashio mine was responsible led local residents to submit two petitions in defense of their livelihoods between December 1890 and the summer of 1891. The first petition, presented to the governor of Tochigi with one-thousand peasant signatures, identified effluent in the river as the cause of damage all had suffered and called for the closure of the mine unless the polluting of the Watarase stopped.<sup>11)</sup> The second was sent to Mutsu Munemitsu, then Minister of Agriculture and Commerce, after scientific tests on polluted soil had confirmed suspicion about the mine's culpability. Buoyed by this proof, the drafters of the second appeal went a step further and urged Mutsu both to close the mine on a temporary basis and to take steps to clean up the pollution.<sup>12)</sup>

The failure of either petition to elicit a response from the government spurred Tanaka Shōzō to take the protest to the floor of the Diet on December 18, 1891. Former chairman of the Tochigi Prefectural Assembly, Tanaka had been elected to the first House of Representatives from his native district of Aso, one of the most severely polluted. On December 18, he invoked both Article 27 of the Meiji Constitution and Japanese mining law in his criticism of government inaction. The former guaranteed that individual property rights were inviolable, and the latter gave the Minister of Agriculture and Commerce the power and duty to halt all mining deemed detrimental to the public good. In closing, Tanaka questioned why the government had yet to act to stop the pollution of the Watarase and inquired about what specific steps the government planned to take to prevent further damage. The government finally issued a formal response in the summer of 1892. This statement acknowledged that toxic wastes from the mine were responsible for the land's infertility, but added that the extent of damage did not threaten public interest and, therefore, did not warrant the closing of the mine. Moreover, the statement claimed that Furukawa had begun to make improvements that would prevent future pollution.<sup>13)</sup>

Tanaka considered this response far from satisfactory and continued to censure the government in the Diet. The need for treaty revision, dissension over the budget, and fighting among political parties, however, diverted what little attention he garnered. The outbreak of the Sino-Japanese War and the use of Ashio copper to meet materiel needs further hindered his efforts to keep pollution at the forefront of Diet concerns.<sup>14)</sup> Opposition by local residents had tapered off as a result of agreements many villages had concluded with Furukawa. According to these agreements, Furukawa promised to pay compensation and to begin using dust extractors by June 1893, equipment that would supposedly combat pollution. Villagers, in exchange, agreed to a roughly three-year period of silence during which all would wait and see if the extractors were

effective.<sup>15)</sup>

Devastating floods in 1896, the worst the northwestern Kanto Plain had seen in over forty years, proved the futility of the extractors and reignited the protest movement. Tanaka again raised his voice in the Diet to denounce the government and Furukawa and to demand relief measures. More publicly, newspapers began to report on the extent of pollution damage and suffering and, together with lecture meetings, succeeded in arousing widespread concern. No longer bound to silence, local residents repeatedly petitioned to have the mine closed and to receive a tax remission on polluted land. First in 1897, twice in 1898, and again in 1900, they staged mass marches to Tokyo to prompt government action. A clash with police during the 1900 march and the subsequent trial of fifty-one on charges of “incitement to riot” and “resisting the police” finally focused public attention on the region’s growing problem of copper pollution.<sup>16)</sup>

### **Awakening the JWCTU to the Damage and Suffering**

Roughly four-and-a-half years before this trial began, the first public pollution lecture meeting was held at a youth hall in Tokyo’s Kanda neighborhood. Joining Tanaka at the podium to decry the government’s failure to address the pollution problem and to implement suitable relief measures were Shimada Saburō, owner/editor of *Mainichi shimbun* and a fellow member of the House of Representatives, and Tsuda Sen, a temperance activist and scholar of Western agriculture.<sup>17)</sup> Both had helped to promote the WCTU and its agenda from the society’s founding days. They also maintained a personal relationship through family ties to WCTU members, as did fellow pollution activists Honda Yōichi, Kinoshita Naoe, and Tokutomi Sohō.<sup>18)</sup>

Because of these ties and almost daily newspaper coverage of the pollution, it is unlikely that JWCTU leaders, if not the rank-and-file, remained unaware of the problem. The JWCTU did not, however, soon become involved. This absence from the opposition movement is especially noticeable in light of the organization’s commitment “to promote the welfare and happiness of all of society” and history of providing humanitarian aid after natural disasters. A reluctance to use the opposition’s methods, namely to petition the government, to appeal to individual officials, and to speak out in public, fails to explain the JWCTU’s lack of early involvement. Indeed, members had employed these same means for a decade. The question remains, why? Many Japanese believed that the reports of damage and suffering were greatly exaggerated. Tsuda himself had first viewed Tanaka as a “charlatan” who overstated the facts for “personal political gain.”<sup>19)</sup> Only after he toured the polluted area in late 1896 and saw how horrendous conditions were with his own eyes did he join Tanaka. There is no indication that JWCTU members harbored similar doubts. However, more intimate knowledge did ultimately inspire members to act.

Tanaka provided some of that knowledge himself when he served as a keynote speaker at the JWCTU’s eighth annual convention in April 1901. He began his address by relating how he had just recently become a partner in the JWCTU’s own work by co-sponsoring in the House of Representatives the organization’s petitions for revision of the criminal and civil codes and regulation of Japanese prostitutes overseas.

After urging support for the JWCTU, he turned to the problem of pollution. He appealed to the members of his audience for help in rescuing the many who suffered from health problems and asked them to travel to the affected areas and see firsthand the rotting fields and the people dying of starvation.<sup>20)</sup>

Tanaka also issued a more individual appeal to Ushioda Chiseko, then president of the Tokyo WCTU, the largest and most active of all JWCTU branches. If not at the convention itself, then very soon thereafter, he asked her to join the *Kōdoku Chōsa Yūshikai* (Volunteer Society to Investigate Mine Pollution). A group of journalists, politicians, and intellectuals, including JWCTU supporters Iwamoto Yoshiharu and Abe Isoo, had established the *Yūshikai* in July 1900. On the society's behalf, they commissioned scientific surveys to determine the exact damage to water and soil and held lecture meetings to inform the public.<sup>21)</sup> As a member of the *Yūshikai*, Ushioda received surveys and reports, and periodically others in the group visited and told her about the horrible living conditions of pollution victims. These reports were so disturbing that she reported feeling a swell of "great responsibility" far exceeding anything she had felt after reading accounts of damage and suffering in newspapers and magazines.<sup>22)</sup>

In the wake of these developments, the stage seemed to be set for Ushioda and the JWCTU to take up the mantle of anti-pollution activism. The April 1901 edition of *Fujin shimpō* gave the impression that this, indeed, would be the case. This issue carried the text of Tanaka's convention address and a brief article in which the editors expressed the JWCTU's desire to arouse public concern, hopes for the enactment of comprehensive relief measures, and intention to sell widely a picture book depicting the destruction of homes and farmland near the Watarase.<sup>23)</sup> A review of subsequent issues of *Fujin shimpō* reveals that, despite this article's suggestion of greater activism, the JWCTU did little more over the next six months than publish advertisements for the picture book in two issues of the periodical. Domestic and foreign travels by leading members during the summer of 1901 were one factor, as was a continued emotional detachment born of the lack of any firsthand understanding of the victims' suffering. Ushioda herself was preoccupied with managing *Jiaikan*, a facility the JWCTU had opened in 1894 in cooperation with American Protestant missionaries to teach former prostitutes and destitute women a means of honorable self-support. She was also in charge of planning and leading dozens of poor children from Tokyo on a pleasure trip to Kamakura and simply lacked the time to take up full-scale relief work.

What Ushioda did not lack was a strong commitment to social action conditioned by both her religious beliefs and experiences. The second daughter of a physician in the Shinshu domain, she was born in 1845, and, at the age of twenty, married into a family of chief retainers with a sizeable annual stipend from the same domain. Changes to the stipend system after the Meiji Restoration led to the family's bankruptcy, and, after her husband's death in 1883, she found herself emotionally and financially responsible for raising her five children. Lacking practical skills, she enrolled in a kindergarten teacher's training course in Tokyo and later struggled to support her family with educational work.<sup>24)</sup> Her Christian faith provided her with the emotional strength she needed to endure these trials. She later told a friend that, had she not been a Christian, she would probably not have even considered moving to Tokyo. Only

because she “believed that God was watching over her” had she been able to make such a momentous decision.<sup>25)</sup>

Heavily influenced by Methodist missionaries, who were the first to proselytize in Shinshu, Ushioda was baptized in 1882, one year before her husband’s passing. She accepted Christ’s teachings as the “good news of human liberation” and viewed the true meaning of a life of faith not only as a life without personal sin, but also as a life of giving witness to Christ’s example. This included following Christ’s injunction to his disciples on the Mount of Olives to feed the hungry, clothe the naked, give drink to the thirsty, and nurse the sick. This faith combined with Ushioda’s keen awareness gained from experience of the trials women faced without financial independence and education and led her to become active in the WCTU. Given the strength of her religious and social convictions and her increasing consciousness of the extent of pollution damage, it was only a matter of time before she actively initiated relief work.<sup>26)</sup>

### **Towards Full-scale Involvement by Ushioda and the JWCTU**

The final catalyst for full-scale involvement by Ushioda and the JWCTU proved to be a lecture meeting held in Tokyo in early November 1901. The roster of speakers included Iwamoto, Abe, and Shimada. Their insistent calls for members of the audience to visit the polluted area finally impelled Ushioda to act. On November 16 together with JWCTU president Yajima Kajiko, fellow members Kuchida Yoshiko and Shimada Nobuko, and Matsumoto Eiko, a reporter for *Mainichi shimbun*, she followed Tanaka on a guided tour of some of the most severely damaged villages.<sup>27)</sup> The group had originally planned a one-day trip, but Ushioda and Matsumoto found the suffering they witnessed so overwhelming that they stayed two nights.<sup>28)</sup> Matsumoto’s reports of this and subsequent trips and of widespread suffering and devastation were subsequently serialized in *Mainichi shimbun* and did much to heighten general public awareness.<sup>29)</sup>

Ushioda also took up her pen and published a two-part report in *Fujo shimbun* shortly after returning to Tokyo. In simple language, she described the rotten and withered rice plants and mulberry trees they had passed and related her alarm at the extent to which copper pollution had infected the land. She told of a visit to one family rendered economically and physically incapacitated by pollution and detailed the deteriorating condition of a school. Foreshadowing a concrete relief measure she would later implement, she posed the question of what measures could be taken to rescue women who were healthy enough to work but who lacked a means to feed and clothe their families. Pervading her report was a deep sense of regret at how long it had taken her to visit and to realize and appreciate the need for relief work.<sup>30)</sup>

At a Tokyo WCTU committee meeting convened prior to this trip, Ushioda, Yajima, and the others in attendance had voted to hold a charity lecture meeting to benefit victims.<sup>31)</sup> This rally took place on November 29, attracted an audience of more than one thousand, lasted over four hours, and included speeches by Ushioda, Kinoshita, Shimada, and Abe. At the conclusion, Ushioda, Yajima, and JWCTU member Yamawaki Fusako took to the stage where they fervently appealed for compassion toward the victims of pollution and called for the establishment of a women’s relief organization.<sup>32)</sup> Assuming the lead, these three joined other JWCTU

members at Nihonbashi Church on December 6, 1901, and formally established the *Kōdokuchi Fujin Kyūsaikai* (Women's Mine Pollution Relief Association) with the stated purpose to relieve poverty in contaminated areas along the Watarase River. Ushioda's trip had ignited an overwhelming desire to devote her energies to the poor and relief work as head of the *Kyūsaikai*. To remove one constraint on her time, she resigned as Tokyo WCTU president at the union's annual meeting on December 7. The branch's membership disregarded her wishes and promptly reelected her. She nonetheless labored tirelessly for the sake of pollution victims.<sup>33)</sup>

### ***Kyūsaikai* Activities**

With Ushioda at the helm, the *Kyūsaikai* and, by extension, the JWCTU, undertook a variety of relief activities. Paramount was the sponsorship of public lecture meetings aimed to spread information about the devastation wrought by effluents in the Watarase River and to solicit money and relief goods. In December 1901 alone, more than half a dozen mass meetings were held at churches and Christian halls in Tokyo and Yokohama, with Ushioda, Kinoshita, Shimada, and Tamura Naomi, a former minister and social welfare activist, among the list of speakers. The eloquence and power of their words inspired attendees to give money generously and even to donate the clothes off their own backs.<sup>34)</sup> In February 1902, Ushioda embarked on a week-long lecture tour with Kinoshita and Tamura. At gatherings in Otsu, Kyoto, Kobe, Osaka, Hikone, and Nagoya, they addressed crowds of men and women consistently numbering in the hundreds. One lecture site was so full that they could not squeeze down the aisle and had to enter from the building's rear. Ushioda also spoke at the Kyoto prefectural higher girls' school at the last-minute request of a student who had seen a notice for another assembly. Representative of her oratorical style, this talk was not a sermon or an impassioned discourse on social justice. Rather, Ushioda discussed the origin of pollution and solemnly described her visit to the contaminated countryside and the damage she had witnessed.<sup>35)</sup> By June 1902, the *Kyūsaikai* had collected over ¥7000 in cash.<sup>36)</sup> This figure testifies to the efficacy of lecture meetings as a fund-raising tool, to the persuasive skills of those who spoke at *Kyūsaikai* meetings, and to the extent of public concern for the victims of the Ashio mine.

Another major activity of the *Kyūsaikai* involved the allocation of this money and the distribution of the clothes and other relief goods donated at lecture meetings, or subsequently to the offices of *Mainichi shimbun*. While some materials were merely sent, Ushioda and Matsumoto returned to the northwestern Kanto Plain on numerous occasions and used these opportunities to go door to door and hand out food and clothing from rickshaws. Kinoshita frequently accompanied them and later offered a sketch of Ushioda at work. According to him, she maintained a calm demeanor when providing comfort and encouragement, but the evident misery led her to shed great tears afterwards.<sup>37)</sup> The material goods Ushioda, Matsumoto, and Kinoshita helped to distribute included millet, dried fish, pickled plums, shirts, socks, underwear, hats, cushions, towels, and, interestingly, silk bedding. This last item may have been somewhat inappropriate given the extreme straits of the recipients. However, to an individual bereft of possessions, bedding was still bedding, even when made with silk. The *Kyūsaikai's* attempts to feed the hungry and clothe the naked, as well as to provide

medical care through the dispatch of doctors and nurses and the establishment of a free clinic, did contribute greatly to assuaging need. As such, the association's charity work can be called a successful component of its relief program.<sup>38)</sup>

Under Ushioda's leadership, the *Kyūsaikai* also worked to implement social welfare measures that would address fundamental problems facing women in society. During her first tour of the polluted region, Ushioda was particularly struck by the low number of girls receiving an education. Indeed, female students occupied fewer than 4% of the seats at the school she and her companions visited. Based on her own experience, she keenly felt the need to educate the daughters of such impoverished families. She did not let the lack of a concrete plan for where the girls would live and who would supervise them stop her from asking parents for permission to take their daughters back to Tokyo. Lingering suspicions of Christianity and difficulties in separating parents and children served as initial hurdles. However, by the beginning of December 1901, twelve girls ranging in age from seven to eighteen had taken up residence at *Jiaikan*, which became Ushioda's solution to the problem of housing.<sup>39)</sup> A few more girls arrived shortly thereafter, yet the total enrollment from polluted districts was minimal. Even the small promise this number represented was not to be fulfilled, as five girls returned home within a matter of months. Illness and homesickness accounted for some of these and subsequent departures. The overtly Christian atmosphere at *Jiaikan*, reinforced by morning prayer, recitations of Bible verses, weekly church attendance, and a Christmas celebration at which Ushioda identified Christ as the girls' personal savior, in other words an atmosphere so alien from their home lives, likely contributed to the leaving of others.<sup>40)</sup>

Much more successful was the establishment of a vocational training center for women. As previously mentioned, in Ushioda's published account of her first tour to survey the polluted area, she asked what measures could be taken to rescue healthy women who lacked skills to earn an honorable living. Her concern stemmed in part from her own struggles as a widow trying to support five children and in part from her years of active participation in the movement to abolish licensed prostitution. Both experiences had instilled in her the conviction that economic independence was a necessary precondition for a woman's independence. Moreover, her faith had led her to believe that spiritual independence required a sound financial base. In keeping with these convictions, in early 1903, she established a vocational training center in Yanaka Village in the heart of the most heavily damaged section of the plain. Here, local women learned to weave a material used in the manufacture of Western hats. Needing only to be physically fit, even a weaver of average ability was able to earn enough each day to support a family. In February 1903, Ushioda reported in *Fujin shimpō* that more than ninety women of all ages had already received training and that each day saw more knocking on the center's door. Encouraged by this success, she expressed her hope to open similar centers in other villages.<sup>41)</sup> Whether or not she actually accomplished any expansion before she succumbed to stomach cancer five months later remains unclear.

## Conclusion

With Ushioda's passing on July 4, 1903, the *Kyūsaikai* essentially ceased to operate.<sup>42)</sup>



Even if Yajima or another JWCTU member who had been active at one point had stepped forward to take charge, the question remains how long the association could have continued to maintain public support. Anti-pollution steps the government had forced Furukawa to take in 1897 had begun to show results, and farmers were again able to grow and harvest crops. The conclusion of the trials of the fifty-one farmers arrested in 1900 brought an end to the almost daily press coverage of the proceedings, coverage that had kept the pollution problem in the spotlight. The Russo-Japanese War pushed Ashio even farther from the public mind.<sup>43)</sup> The question of the *Kyūsaikai*'s longevity aside, during its brief history, the association did play a valuable role in disseminating information about the extent of pollution damage and human suffering and in collecting and distributing essential goods. Moreover, because Ushioda saw relief as inextricably linked to the fundamental improvement of women's position in society, she took concrete steps to provide educational and employment opportunities. Together with a letter she and other JWCTU members sent to Furukawa shortly after the founding of the *Kyūsaikai* demanding that the mine be shut down, these steps reflected her goal, and that of the JWCTU, of achieving systemic change.

#### Notes

- 1) *Fujin shimpō*, no. 25 (20 May 1899): 29.
- 2) F.G. Notehelfer, "Japan's First Pollution Incident," *The Journal of Japanese Studies* 1, no. 2 (Spring 1975): 380.
- 3) *Ibid.*, 352–53; Kenneth Strong, *Ox against the storm: A biography of Tanaka Shozo, Japan's conservationist pioneer* (Victoria: University of British Columbia Press, 1977), 65.
- 4) Notehelfer, 353; Alan Stone, "The Japanese Muckrakers," *The Journal of Japanese Studies* 1, no. 2 (Spring 1975): 386.
- 5) Also providing capital were a former *daimyō* family, novelist Shiga Naoya's grandfather, and Inoue Kaoru, who became the minister of industry in 1878. Notehelfer, 353, 356; Strong, 66; Janet E. Hunter, comp., *Concise Dictionary of Modern Japanese History* (Berkeley: University of California Press, 1984), 70.
- 6) This figure, together with the fact that only silk and tea surpassed copper in importance as an export good, alludes to how crucial the mine had become as an instrument of Japan's economic strengthening. Notehelfer, 356–61; Strong, 66.
- 7) Strong, 1, 68.
- 8) Stone, 387.
- 9) *Ibid.*; Notehelfer, 363.
- 10) Notehelfer, 361–63, 367–68; Strong, 69–72, 75, 86.
- 11) Strong, 70–71.
- 12) Notehelfer, 363.
- 13) *Ibid.*, 363–65; Strong, 62–64, 75–76.
- 14) Strong, 76–79.
- 15) Notehelfer, 366.
- 16) *Ibid.*, 368–71, 373–80; Stone, 392, 394–96; Strong, 86–93, 99–111, 114–16.
- 17) Notehelfer, 370–71; Abe Reiko, "Ashio kōdoku mondai to Ushioda Chiseko" [The Ashio mine pollution problem and Ushioda Chiseko], *Rekishi hyōron*, no. 347 (March 1979): 100.
- 18) The wives of all five were members, as were Tokutomi's mother and aunt, JWCTU president Yajima Kajiko.
- 19) Notehelfer, 370.
- 20) Tanaka Shōzō, "Kyōfūkaiin sono hoka ni taisuru kibō" [My hopes for JWCTU members and others],

- Fujin shimpō*, no. 48 (25 April 1901): 14–15.
- 21) Gomi Yuriko, ed., *Zoku shakai jigyōni ikita joseitachi: Sono shōgai to shigoto* [Women who have engaged in social work: Their lives and labors] (Tokyo: Domesu shuppan, 1980), 36.
  - 22) Ushioda Chiseko, “Kōdoku higaichi Watarase no min” [The people of the Watarase and the mine polluted area], *Fujo shimbun*, no. 81 (25 November 1901): 4.
  - 23) “Ashio kōdoku sanjō gahō” [A picture of the horrible conditions caused by Ashio mine pollution], *Fujin shimpō*, no. 48 (25 April 1901): 29.
  - 24) Kudō Eiichi, “Ashio kōdoku jiken ni okeru Ushioda Chiseko: Kirisutokyō no mondai o chūshin toshite” [Ushioda Chiseko and the Ashio mine pollution incident: A focus on the issue of Christianity], *Mita gakkai zasshi* 75, no. 3 (June 1982): 4–6.
  - 25) “Ko Ushioda Chiseko tōji (jō)” [The former Mrs. Ushioda Chiseko (part 1)], *Fujin shimpō*, no. 75 (25 July 1903): 256; reprinted in Gomi, 42.
  - 26) Kudō, 5–7.
  - 27) Esashi Akiko, *Onna no kuse ni: Kusawake no josei shimbun kishatachi* [The habits of women: Pioneer women newspaper journalists] (Tokyo: Inpakuto shuppankai, 1997), 112.
  - 28) Ushioda, “Kōdoku higaichi Watarase no min,” 4; Abe, 102.
  - 29) Matsumoto compiled some of her Mainichi shimbun articles and republished them in a collection with a handful of accounts by others. *Matsumoto Eiko, ed., Kōdokuchi no sanjō: Dai-ippen* [The pitiful situation of the mine polluted land: Volume 1] (Tokyo: Kyōbunkan, 1902).
  - 30) Ushioda, “Kōdoku higaichi Watarase no min,” 4; *ibid.*, “Kōdoku higaichi Watarase no min (continued)” *Fujo shimbun*, no. 82 (2 December 1901): 4.
  - 31) “Tōkyō Fujin Kyōfūkai iinkai” [Tokyo WCTU committee meeting], *Fujin shimpō*, no. (25 November 1901): 26.
  - 32) *Fujin shimpō*, no. 56 (25 December 1901): 29.
  - 33) Nihon Kirisutokyō Fujin Kyōfūkai, ed., *Nihon Kirisutokyō Fujin Kyōfūkai hyaku-nen shi* [One-hundred-year history of the JWCTU] (Tokyo: Domesu shuppan, 1986), 181–82; *Fujin shimpō*, no. 56 (25 December 1901): 25.
  - 34) “Kōdoku higaichi kyūsai enzetsukai” [Lecture meetings for the relief of the mine polluted area], *Fujin shimpō*, no. 56 (25 December 1901): 15; Kudō, 10.
  - 35) Abe, 107–9.
  - 36) Rumi Yasutake, “Transnational Women’s Activism: The Woman’s Christian Temperance Union in Japan and Beyond, 1858–1920” (Ph.D. diss., University of California, Los Angeles, 1998), 177. To put this total in perspective, 1 *shō* (1.8 liter) of rice sold for 12 sen (1 sen = 1/100 of a yen) in 1902. Abe, 106.
  - 37) Abe, 105.
  - 38) “Kōdoku kyūsai mondai ihō” [Report of mine pollution relief], *Fujin shimpō*, no. 58 (25 February 1902): 10–11; Strong, 139.
  - 39) Kudō, 13; Ushioda, “Kōdoku higaichi Watarase no min (continued),” 4; “Kōdokuchi Fujin Kyūsaikai” [The Women’s Mine Pollution Relief Association], *Fujin shimpō*, no. 56 (25 December 1901): 14.
  - 40) Strong, 139; “Jiaikan iinkai oyobi hōkoku” [Jiaikan committee meeting and report], *Fujin shimpō*, no. 62 (25 June 1902): 12; Nihon Kirisutokyō Fujin Kyōfūkai, ed., 184–86.
  - 41) Ushioda Chiseko, “Kōdoku higaichi junkai hōkoku” [Report from my tour of the mine polluted area], *Fujin shimpō*, no. 70 (25 February 1903): 16.
  - 42) Kudō, 14.
  - 43) Notehelper, 380.